Math – 7th Grade TAKS Tests (2003, 2004, 2006) By Objective

OBJECTIVE 1:
The student will demonstrate an understanding of numbers, operations, and quantitative reasoning.

1. 7.1.a	Identify the group that does not contain equivalent fractions, decimals, and percents. A. $\frac{1}{20}, 0.05, 5\%$ B. $\frac{7}{10}, 0.7, 70\%$ C. $\frac{1}{8}, 0.125, 12.5\%$ D. $\frac{3}{100}, 0.3, 3\%$	
2. 7.1.a	The fraction $\frac{5}{8}$ is found between which pair of fractions on a number line? A. $\frac{8}{16}, \frac{21}{32}$ B. $\frac{9}{16}, \frac{19}{32}$ C. $\frac{10}{16}, \frac{24}{32}$ D. $\frac{11}{16}, \frac{24}{32}$	
3. 7.1.a	An electrician has been working at 4 customer sites. He has completed $\frac{1}{2}, \frac{1}{4}, \frac{1}{8}$, and $\frac{3}{4}$ of his work at the sites. Which list shows the percent of work completed at the sites in order from greatest to least? A. 12.5%, 25%, 50%, 75% B. 0.75%, 0.125%, 0.25%, 0.50% C. 75%, 50%, 25%, 12.5% D. 25%, 50%, 75%, 125%	
4. 7.1.a	The table shows several countries and the portion of their population that is under age 15. List the countries in order from least to greatest portion of the population under age 15.	

Country	Portion of population under age 15
Chad	47.8%
United States	$\frac{1}{5}$
Uganda	$\frac{1}{2}$
Benin	$\frac{23}{50}$
Ethiopia	47.3%

5. 7.1.b	Conner's parents asked him to save $\frac{2}{5}$ of his allowance each week to help pay for summer camp. What percent of his allowance did Conner's parents ask him to save?	

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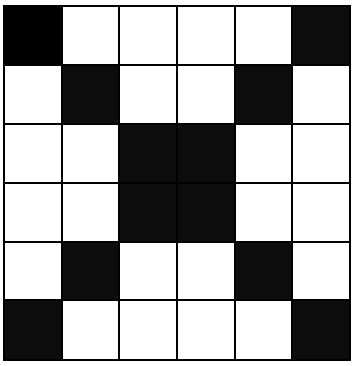
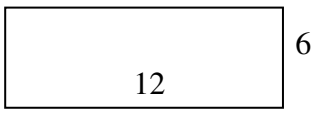
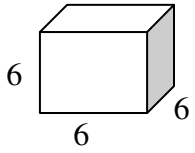
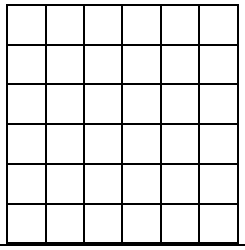
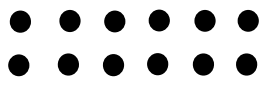
6. 7.1.b	Sandra colored $\frac{1}{3}$ of her picture black as shown below.  What percent of her picture did Sandra color black? A. 12% B. 24% C. $33\frac{1}{3}\%$ D. $66\frac{2}{3}\%$	
7. 7.1.b	It is estimated that 20.4% of the US population in the year 2050 will be over the age of 65. Which number is NOT equivalent to 20.4%? A. $\frac{204}{1000}$ B. $\frac{20.4}{100}$ C. 0.204 D. 2.04	
8. 7.1.b	Mrs. Newsome said that $\frac{1}{8}$ of the faculty at Long High School had attended the school as teenagers. Write a decimal and a percent equivalent to $\frac{1}{8}$.	
9. 7.1.c	Which of these best represents 6^2 ? A.  B.  C.  D. 	

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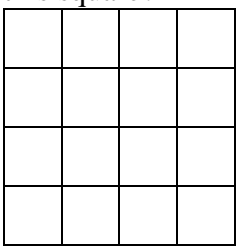
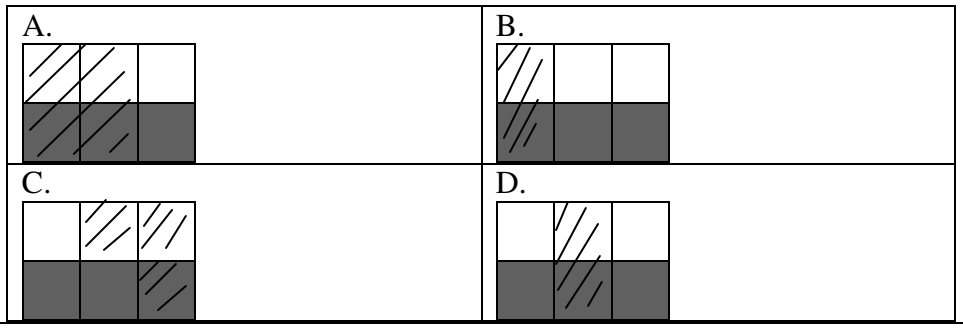
10. 7.1.c	The model below represents $\sqrt{49} = 7$. Which arrangement of small squares can be used to model a large square that represents $\sqrt{196}$? A. 4 rows of 49 squares B. 6 rows of 36 squares C. 12 rows of 12 squares D. 14 rows of 14 squares	
11. 7.1.c	The model below can be used to represent the area of a square with a side length of $\sqrt{16}$ units. What is another way to represent the side length of this square?  A. 64 B. 4 C. $\sqrt{64}$ D. $\sqrt{4}$	
12. 7.2.a	Which expression can be used to find the maximum number of 0.2 meter lengths of rope that can be cut from a 6.5 meter length rope? A. $0.2 \div 6.5$ B. $0.2 + 6.5$ C. $6.5 \div 0.2$ D. 6.5×0.2	
13. 7.2.a	Which model best represents the expression $\frac{1}{2} \times \frac{2}{3}$?  	
14. 7.2.a	Lynne works at a bank and earns $9.75 per hour. If Lynne works 35 hours per week, which expression could be used to determine her total earnings for 1 year? A. 9.75×35 B. 9.75×52 C. $9.75 \times 35 \times 52$ D. $9.75 \times 35 \times 12$	

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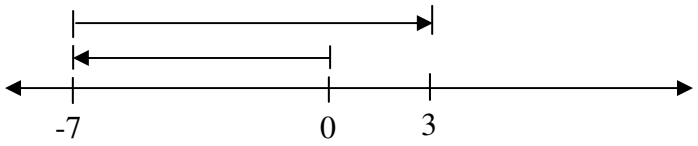
15. 7.2.b	The list below shows the distance Pedro jogged each day last week. $2.3,\ 1\frac{3}{4},\ 2\frac{1}{2},\ 2,\ 1.8,\ 2.6,\ 1\frac{3}{4}$ What was the total distance Pedro jogged last week?	
16. 7.2.b	Nora wants to save $82.50 to buy a special gift for her mother. She has 15 weeks to save the money. If she wants to save the same amount each week, how much money, in dollars and cents, must Nora save each week?	
17. 7.2.c	During a week in December in Anchorage, Alaska, the daily high temperatures were $20°F, 18°F, -10°F, 15°F, -15°F, 25°F,$ and $11°F$. Which expression can be used to find the average daily high temperature during that week? A. $(20+18+10+15+15+25+11)\div 7$ B. $20+18+10+15+15+25+11\div 7$ C. $[20+18+(-10)+15+(-15)+25+11]\div 7$ D. $20+18+(-10)+15+(-15)+25+11\div 7$	
18. 7.2.c	Which expression is represented by the model below?  A. $-7+0$ B. $-7+3$ C. $-7+7$ D. $-7+10$	
19. 7.2.c	A newspaper gains and loses subscribers daily, as shown below. If the newspaper started the year with s subscriptions, which expression can be used to find how many subscriptions the newspaper had at the end of the two-month period? January: 100 New Subscriptions, 30 Cancellations February: 450 New Subscriptions, 120 Cancellations A. $s+100+(-30)+450+(-120)$ B. $s+100+450$ C. $s+100+30+450+120$ D. $s+(-30)+(-120)$	
20. 7.2.d	A recipe that makes 18 cookies calls for $\frac{3}{4}$ cup of sugar. How much sugar is needed to make 2 dozen cookies using this recipe?	
21. 7.2.d	Emmanuel can run 100 meters in 20 seconds. If he competes in the 400 meter race, about how many seconds will it take him to run the race? A. 5 sec. B. 4 sec. C. 80 sec. D. 20 sec.	

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22. 7.2.d	Leon bought a dozen daisies for $3.75. Which is the closest to the amount Leon paid for each daisy? A. $0.25 B. $0.38 C. $0.29 D. $0.31	
23. 7.2.e	What is the value of the expression: $(3+3)^2 \div 6 - 2 \times 4$ A. -18 B. -2 C. 0 D. 16	
24. 7.2.e	Simplify the expression below: $4 + 2(13-4) \div 3^2$ A. 7 B. 2 C. 6 D. 8	
25. 7.2.f	Mrs. Gutierrez bought 2 dozen cans of soda priced at 6 cans for $1.98 and 18 bottles of water priced at 6 bottles for $2.16. What is the total amount she spent, not including tax, on soda and bottled water? A. $6.48 B. $7.92 C. $14.40 D. $16.56	
26. 7.2.g	A bowler scored between 195 points and 215 points per game. Which is the best estimate of the total points she scored in 8 games? A. From 1,350 to 1,550 B. From 1,550 to 1,750 C. From 1,750 to 1,950 D. From 1,950 to 2,150	
27. 7.2.g	Peaches are on sale at $0.95 per pound. Mrs. Hinkle bought 2.75 pounds of peaches. About how much did she pay for the peaches? A. Less than $1.00 B. Between $1.50 and $2.00 C. Between $2.50 and $3.00 D. More than $3.00	
28. 7.2.g	A school district provided the following information about their middle schools to a speaker. The speaker estimated the total number of students who will attend his presentation. ▪ There are 3 middle schools. ▪ There are 20-25 homeroom classes in each middle school. ▪ There are 25-30 students in each homeroom. What is the best estimate of the total number of students who will attend the presentation? A. 1,800 B. 1,125 C. 750 D. 2,500	

Objective 1 Readiness Standards:
7.1.b, 7.2.b, 7.2.f

OBJECTIVE 2:
The student will demonstrate an understanding of patterns, relationships, and algebraic reasoning.

<table>
<tr><td>1.

7.3.a</td><td>The cost of Matt and Natalie's dinner was $27.35. They want to leave a 20% tip. Which of the following is closest to the amount of the tip they want to leave?

A. $4.00 B. $4.50 C. $5.00 D. $5.50</td><td></td></tr>
<tr><td>2.

7.3.a</td><td>A company published 110 books last year, and 8 of them became best-sellers. Which best represents the percent of books the company published last year that did NOT become best-sellers?

A. 7% B. 8% C. 93% D. 102%</td><td></td></tr>
<tr><td>3.

7.3.a</td><td>Mrs. Loya sponsors the Spanish club at Central Middle School. The club has 8 members who are sixth graders, 12 members who are seventh graders, and 10 members who are eighth graders. What percent of the Spanish club members are seventh graders?</td><td></td></tr>
<tr><td>4.

7.3.a</td><td>Which are the following represents the greatest percent change?

A. A tree grew from 6 feet to 12 feet in 1 year.
B. An aquarium that was originally priced at $80 is now $60.
C. A person whose salary was $100 per week is now earning $120 per week.
D. A baby who weighed 7 pounds at birth now weighs 16 pounds.</td><td></td></tr>
<tr><td>5.

7.3.a</td><td>Of the 850 students at Brown Middle School, 38% are in the school band. How many students are in the school band?

A. 32 B. 323 C. 527 D. 812</td><td></td></tr>
<tr><td>6.

7.3.a</td><td>Bradley answered 80% of the questions on his science test correctly. There were 30 questions on the test, and all of the questions had equal value. How many questions did Bradley NOT answer correctly on his test?</td><td></td></tr>
<tr><td>7.

7.3.b</td><td>The prices of 3 different bottles of shampoo are given in the table.
<table><tr><th>Bottle Size (ounces)</th><th>Price</th></tr><tr><td>20</td><td>$7.18</td></tr><tr><td>15</td><td>$4.73</td></tr><tr><td>10</td><td>$3.58</td></tr></table>
Which size bottle of shampoo has the lowest price per ounce?

A. The 20 oz. only B. The 15 oz. and 20 oz. bottles
C. The 15 oz. bottle only D. The 10 oz. and 15 oz. bottles</td><td></td></tr>
<tr><td>8.

7.3.b</td><td>Patrick drew a map of his neighborhood. He used a scale in which 1 inch equals 2 miles. What distance on Patrick's map should represent the 1.5 miles between his house and the nearest gas station?</td><td></td></tr>
</table>

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9. 7.3.b

An athlete on the school football team can run 20 yards in 2.9 seconds. During the football game, the athlete ran 64 yards for a touchdown. If the athlete's rate of speed remained the same, about how long did it take him to run for the touchdown?

A. 9.3 sec. B. 21.3 sec. C. 58 sec. D. 19.2 sec.

10. 7.3.b

Lindy is planning to build a model of a train using a scale where 2 inches represents 25 feet. If the train is 60 feet long, what is the length in inches that Lindy should build the model of the train?

A. 1.2 in. B. 2.4 in. C. 4.8 in. D. 9.6 in.

11. 7.4.a

Which of the following CANNOT be used to find the perimeter of a square with side length s?

A. $s+s+s+s$ B. $2s+2s$
C. $4s$ D. $s \times s$

12. 7.4.a

Art's Department Store is having a sale. The table shows the regular price, r, and the sale price, s, of several items.

Item	Regular Price (r)	Sale Price (s)
A	\$5.00	\$2.50
B	\$7.00	\$3.50
C	\$10.00	\$5.00
D	\$12.00	\$6.00

Which formula can be used to calculate the sale price?

A. $s = r - 2.5$ B. $s = r \times 2$
C. $s = r \times 0.5$ D. $s = r - 0.5$

13. 7.4.a

Mrs. Penn has a circular tablecloth with a circumference of 29 feet. Which expression could be used to find the radius of the tablecloth?

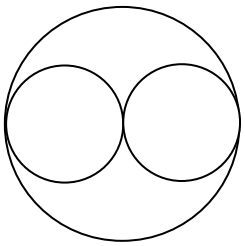
A. $29 - 2\pi$ B. $\frac{29}{2\pi}$
C. $\frac{29}{\pi}$ D. $29 + 2\pi$

14. 7.4.a

Two basketballs can fit inside a hoop, as shown below. If each basketball has a circumference of 30 inches, which equation could be used to find d, the diameter of the hoop?

A. $\frac{30}{\pi} \bullet 2 = d$ B. $\frac{30}{\pi} = d$

C. $30 = \pi \bullet d \bullet 2$ D. $30 \bullet \pi = 2 \bullet d$



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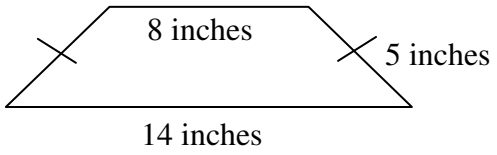
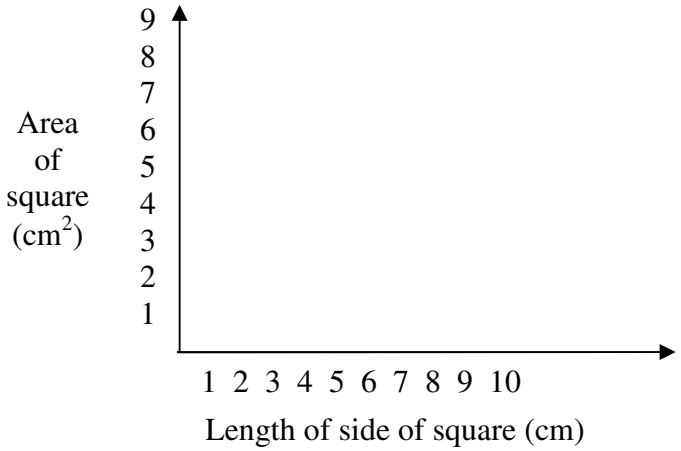
<table>
<tr>
<td>15.

7.4.a</td>
<td>Peter wants to find the perimeter of the isosceles trapezoid shown below. Which equation could Peter use to find P, the perimeter of the trapezoid?

A. $P = 8 \bullet 14 + 5$ B. $P = 8 + 14 + (2 \bullet 5)$
C. $P = (8 + 14) \bullet 4 \div 2$ D. $P = 8 + 5 + 14 + 4$</td>
<td></td>
</tr>
<tr>
<td>16.

7.4.b</td>
<td>The data in the table below represents the relationship between the length of a side of a square in centimeters, x, and the area of a square in centimeters squared, y.
<table><tr><th>Length of side, x</th><th>Area, y</th></tr><tr><td>1</td><td>1</td></tr><tr><td>2</td><td>4</td></tr><tr><td>3</td><td>9</td></tr></table>
Draw a graph that represents the data in the table above.
 
</td>
<td></td>
</tr>
</table>

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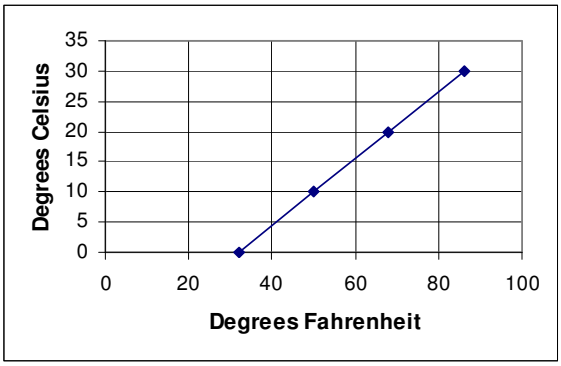
17.

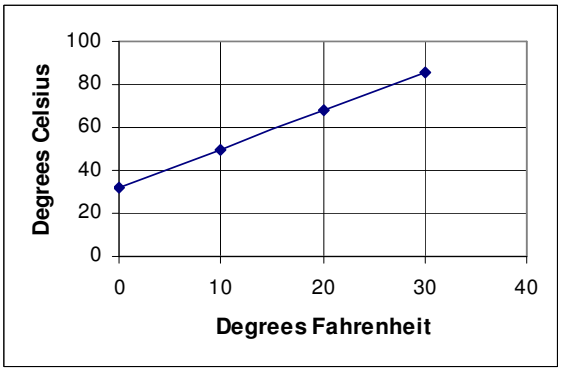
7.4.b

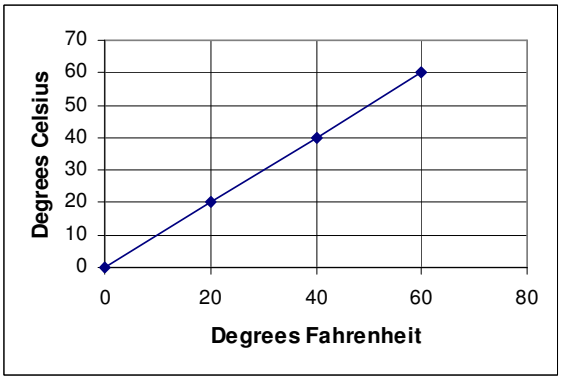
The data in the table below show the relationship between temperature readings in degrees Fahrenheit, *x*, and degrees Celsius, *y*.

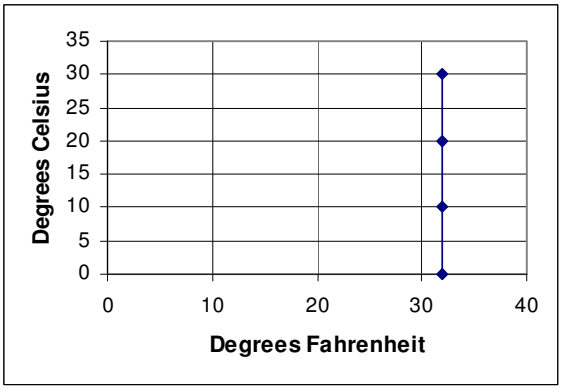
Degrees Fahrenheit, x	Degrees Celsius, y
32	0
50	10
68	20
86	30

Which graph best represents the data in the table above?









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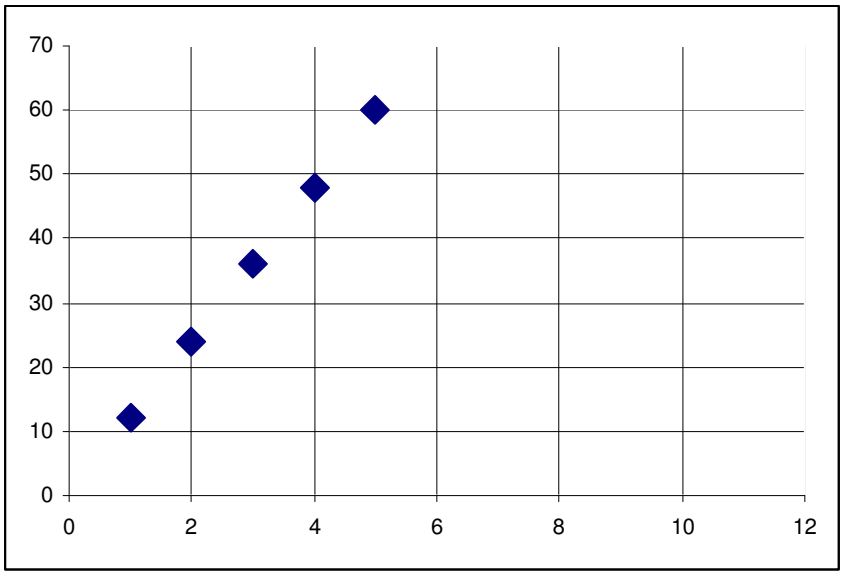
18.

7.4.b

Which of the following relationships is best represented by the data in the graph?



A. Conversion of feet to inches
B. Conversion of miles to feet
C. Conversion of feet to yards
D. Conversion of inches to yards

19.

7.4.c

Which expression can be used to find the *n*th term in this sequence?

Position	1st	2nd	3rd	4th	5th	*n*th
Value of Term	4	7	12	19	28	

A. n^2+3
B. $2n+3$
C. $\frac{n}{2}+3$
D. n^2+2

20.

7.4.c

Which description shows the relationship between a term and *n*, its position in the sequence?

Position	1	2	3	4	5	*n*
Value of Term	1	4	7	10	13	

A. Add 3 to *n*
B. Multiply *n* by 2 and then subtract 3
C. Multiply *n* by 2 and then add 3
D. Multiply *n* by 3 and then subtract 2

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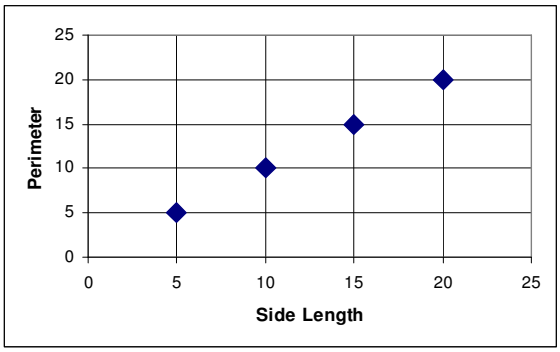
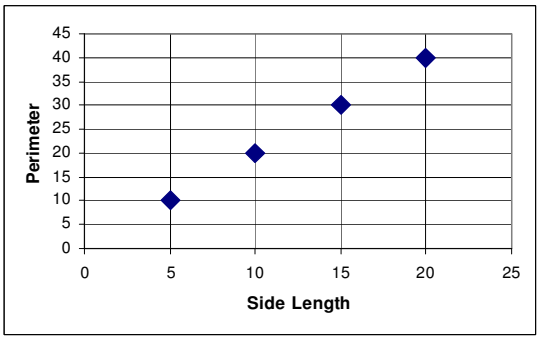
21.

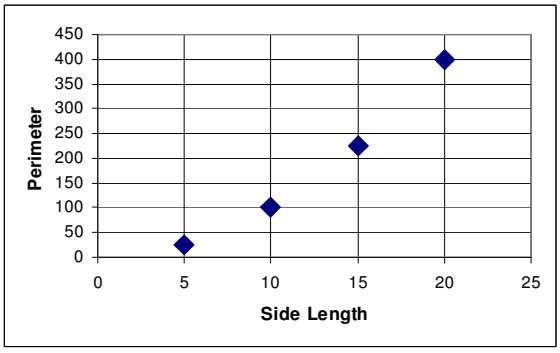
7.4.b

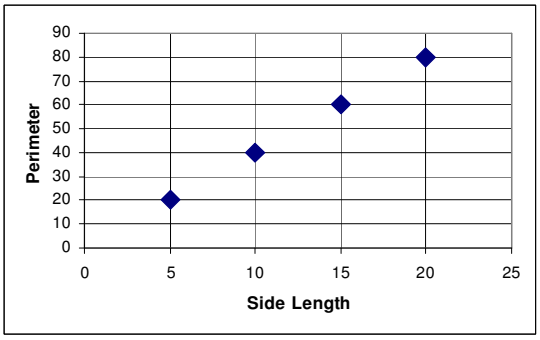
The table below shows the different size of square gardens Charlie can build. Which graph shows the correct relationship between the side length and perimeter of each square garden Charlie can build?

Garden	Side Length
W	5
X	10
Y	15
Z	20









22.

7.4.c

Which sequence follows the rule $8n$-4, where n represents the position of a term in the sequence?

A. 16, 12, 8, 4, 0,…
B. 8, 16, 24, 32, 40,…
C. 4, 16, 64, 216, 1,024,…
D. 4, 12, 20, 28, 36,…

23.

7.4.c

Which description shows the relationship between a term and n, its position in the sequence?

Position	1	2	3	4	5	n
Value of Term	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	$2\frac{1}{2}$	

A. Multiply n by $\frac{1}{2}$
B. Subtract $\frac{1}{2}$ from n
C. Add $\frac{1}{2}$ to n
D. Divide n by $\frac{1}{2}$

Created by Lance Mangham, 6th grade math teacher, Carroll ISD

The student will demonstrate an understanding of patterns, relationships, and algebraic reasoning.

24. 7.4.c

Which rule can be used to find the value of any term in the sequence below where *n* represents the position of the term?

Position	1	2	3	4	5	*n*
Value of Term	6	10	14	18	22	

A. $2n+4$
B. $4n+2$
C. $3n+3$
D. $8n-2$

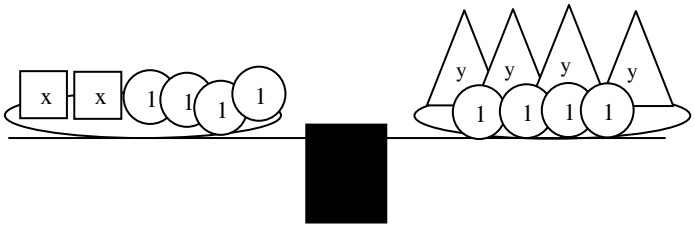
25. 7.4.c

Which sequence follows the rule $\frac{n}{4}$, in which *n* represents the position of a term in the sequence?

A. $\frac{1}{4},\frac{3}{4},1,1\frac{1}{4},1\frac{3}{4},2\frac{1}{4}$
B. $\frac{1}{4},\frac{1}{2},\frac{3}{4},1,1\frac{1}{4},1\frac{1}{2}$
C. $\frac{1}{4},\frac{3}{4},1\frac{1}{4},1\frac{3}{4},2\frac{1}{4}$
D. $\frac{1}{4},\frac{1}{2},1,1\frac{1}{4},1\frac{1}{2},2$

26. 7.5.a

The model represents the equation $2x+4=4y+4$.

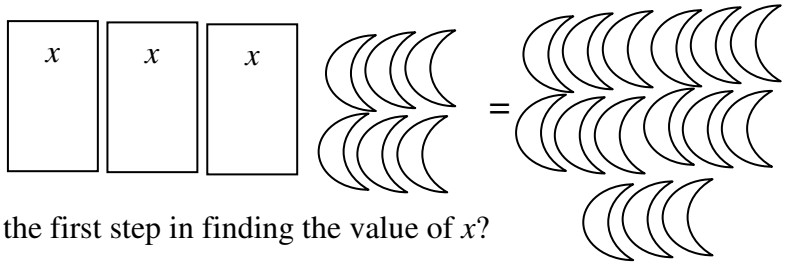


What is the value of *x*?

A. $x=2y$
B. $x=4y$
C. $x=2y+4$
D. $x=4y+8$

27. 7.5.a

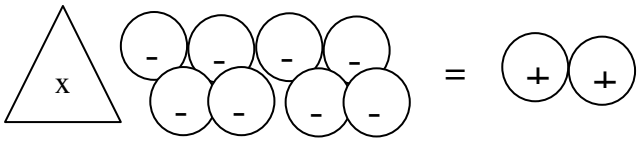
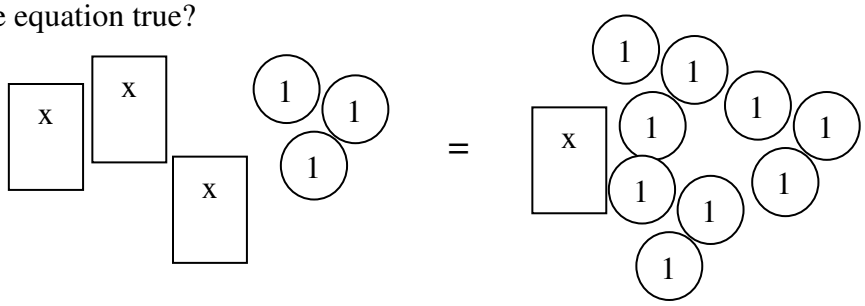
The model below represents the equation $3x+6=15$.



What is the first step in finding the value of *x*?

A. Divide the bananas equally among the 3 cups.
B. Add 15 bananas to each side of the model.
C. Add 6 bananas to each side of the model.
D. Subtract 6 bananas from each side of the model.

OBJECTIVE 2:
The student will demonstrate an understanding of patterns, relationships, and algebraic reasoning.

28. 7.5.a	The model represents the equation $x-8=2$.  What is the value of x? A. $x=-6$ B. $x=4$ C. $x=8$ D. $x=10$	
29. 7.5.a	The equation $3x+3=x+9$ is modeled below. What value of x makes the equation true?  A. $x=3$ B. $x=6$ C. $x=12$ D. $x=4$	
30. 7.5.b	Which problem situation matches the equation below? $$\frac{(80+90+88+100+x)}{5}=90$$ A. The heights of four trees in Tom's yard are 80 feet, 90 feet, 88 feet, and 100 feet. Find x, the average height of the trees. B. The weights of four packages Bev is mailing are 80 ounces, 90 ounces, 88 ounces, and 100 ounces. Find x, the sum of the weights of the four packages. C. Rhonda's first four quiz grades were 80, 90, 88, and 100. Find x, the grade Rhonda needs on her fifth quiz to have a quiz average of 90. D. The times it took the first four teams to complete a relay race were 80 seconds, 88 seconds, 90 seconds, and 100 seconds. Find x, the average time it took the first four teams to complete the race.	
31. 7.5.b	Which problem situation matches the equation below? $$15x=120$$ A. Chang collected 120 foreign postage stamps last year. He gave 15% of them to friends. What is x, the number of stamps Chang did not give away? B. Cece exercised 120 minutes each day for 15 days last month. What is x, the total number of hours Cece exercised last month? C. Demetria drove a total of 120 miles this week. She drove 15 miles more this week than she drove last week. What is x, the number of miles Demetria drove last week? D. Adam charges \$15 per hour for labor to repair lawn mowers. What is x, the number of hours Adam worked if he charged \$120 for labor?	

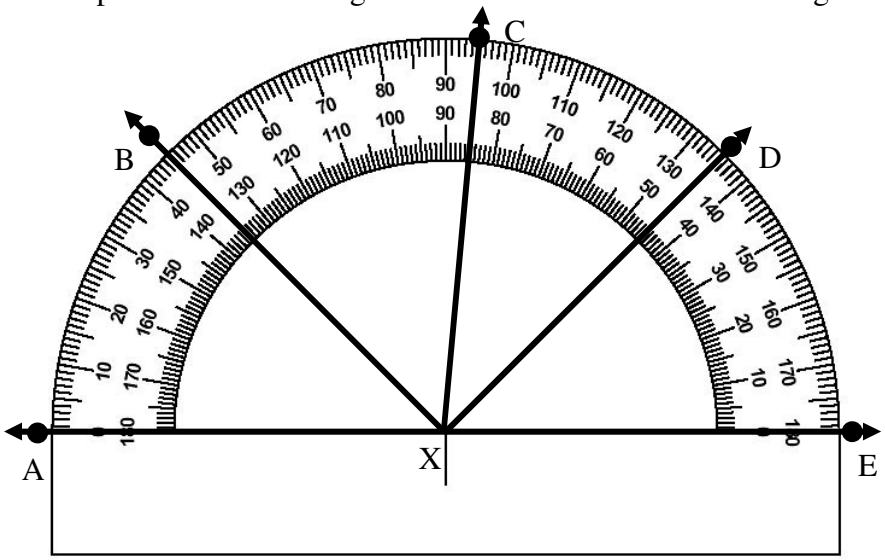
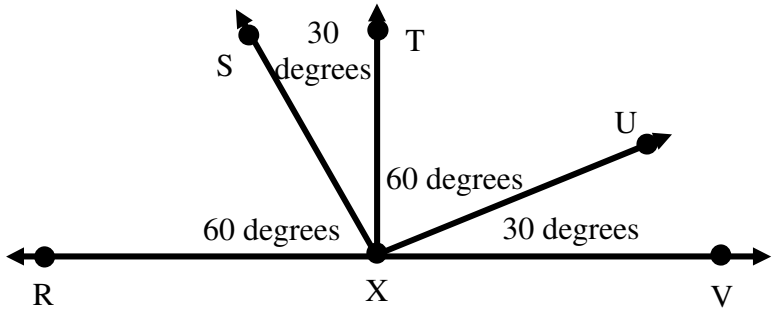
OBJECTIVE 2:
The student will demonstrate an understanding of patterns, relationships, and algebraic reasoning.

32. 7.5.b	Which problem situation matches the equation below? $x - 4.72 = 5.28$ A. Sergio's lunch cost \$4.72. He received \$5.28 in change when he paid the bill. What is *x*, the amount of money he gave the cashier? B. Yvette cycled 4.72 kilometers in a race. The winning cyclist's time was 5.28 seconds faster than Yvette's. What is *x*, the time in seconds it took Yvette to finish the race? C. Janice and Maura measured the wingspans of butterflies in science class. Janice's butterfly had a wingspan of 4.72 centimeters, and Maura's butterfly had a wingspan of 5.28 centimeters. What is *x*, the average length of a butterfly's wingspan? D. Mrs. Castro paid \$4.72 for a jar of iced-tea mix that was originally prices at \$5.28. What is *x*, the amount of money that Mrs. Castro saved altogether?	
33. 7.5.b	Which situation is best represented by the equation: $x - 4 = 16$ A. Miranda picked 16 apples and ate $\frac{1}{4}$ of them. What is *x*, the number of apples she had left? B. Felipe ran for 16 minutes and walked for 4 minutes. What is *x*, the difference between the time he spent running and the time he spent walking? C. Jordan spent \$4 of his allowance and had \$16 left. What is *x*, the total amount of Jordan's allowance? D. Cecilia has hit 4 of the last 16 balls pitched. What is *x*, the total number of balls pitched?	

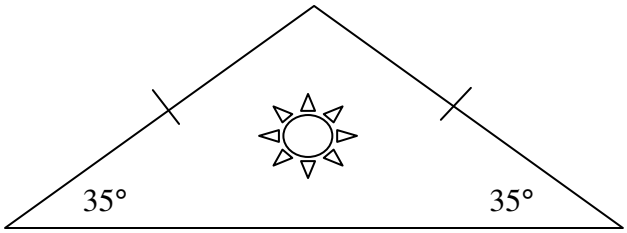
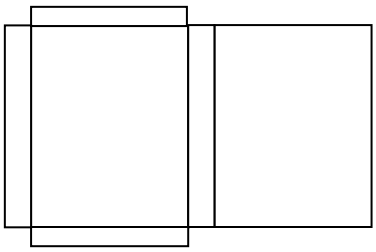
Objective 2 Readiness Standards:

7.3.a, 7.3.b, 7.5.b

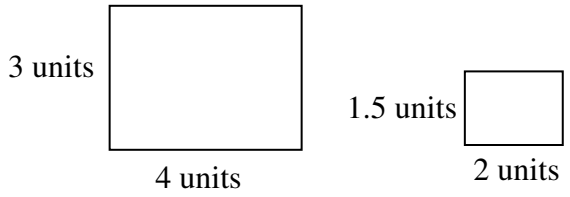
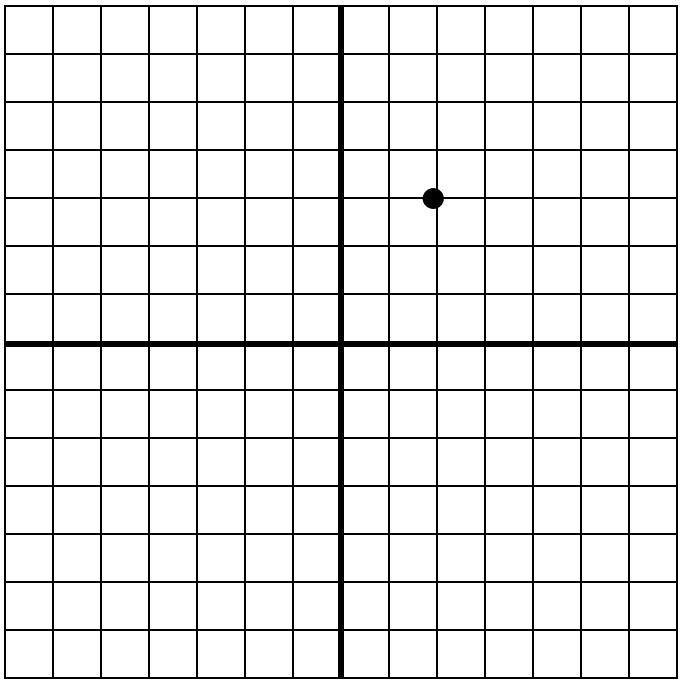
OBJECTIVE 3:
The student will demonstrate an understanding of geometry and spatial reasoning.

1. 7.6.a	If angle T and angle U are supplementary and the measure of angle T is $70°$, what is the measure of angle U? A. $110°$ B. $70°$ C. $20°$ D. $10°$	
2. 7.6.a	Use the protractor in the diagram to read the measure of each angle.  The complementary angles are… A. $\angle DXE$ and $\angle BXC$ B. $\angle AXC$ and $\angle CXE$ C. $\angle DXE$ and $\angle AXB$ D. $\angle CXD$ and $\angle AXB$	
3. 7.6.a	Which 2 angles are NOT complementary?  A. $\angle RXS$ and $\angle TXU$ B. $\angle SXT$ and $\angle TXU$ C. $\angle RXS$ and $\angle SXT$ D. $\angle TXU$ and $\angle UXV$	
4. 7.6.a	If $m\angle 1$ is $75°$, what is the measure of its complementary angle? A. $115°$ B. $105°$ C. $25°$ D. $15°$	

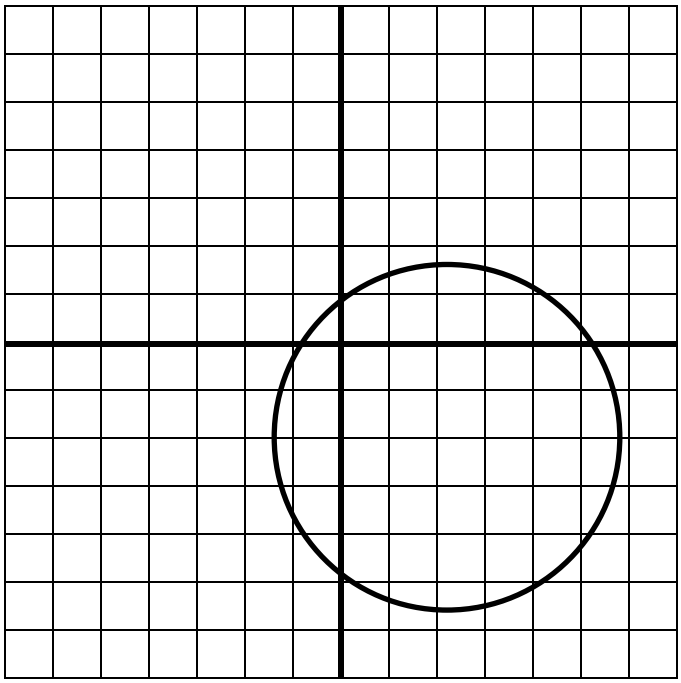
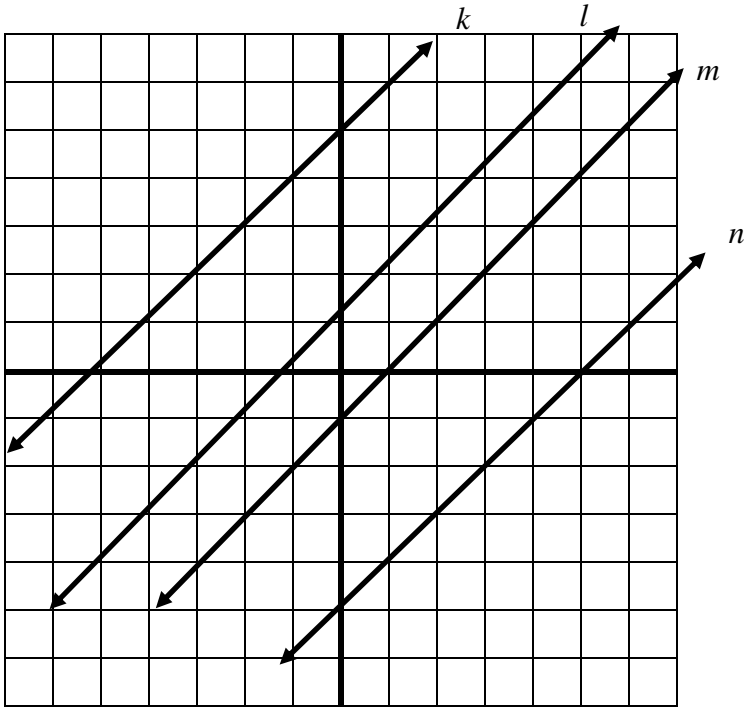
OBJECTIVE 3:
The student will demonstrate an understanding of geometry and spatial reasoning.

5. 7.6.b	Which statement is always true about an equilateral triangle? A. It has 1 right angle. B. It has exactly 2 congruent sides. C. It has 3 congruent sides. D. The sum of any 2 angles is 180° .	
6. 7.6.b	Mr. Olivares installed a triangular piece of stained glass above his front door.  Which of the following best describes the triangle with the given measures? A. Acute equilateral triangle B. Obtuse isosceles triangle C. Right scalene triangle D. Right isosceles triangle	
7. 7.6.b	A triangle with two congruent sides and an angle of 104° is – A. isosceles and right B. isosceles and obtuse C. isosceles and acute D. scalene and obtuse	
8. 7.6.c	Identify the three-dimensional figure that can be formed from this net.  A. A cube B. A rectangular pyramid C. A triangular prism D. A rectangular prism	
9. 7.6.c	Which of the following has 2 parallel bases that are not polygons? A. Cone B. Prism C. Pyramid D. Cylinder	
10. 7.6.d	If the corresponding angles of 2 polygons are congruent and the lengths of the corresponding sides of the polygons are proportional, the polygons are – A. rectangular B. congruent C. symmetric D. similar	

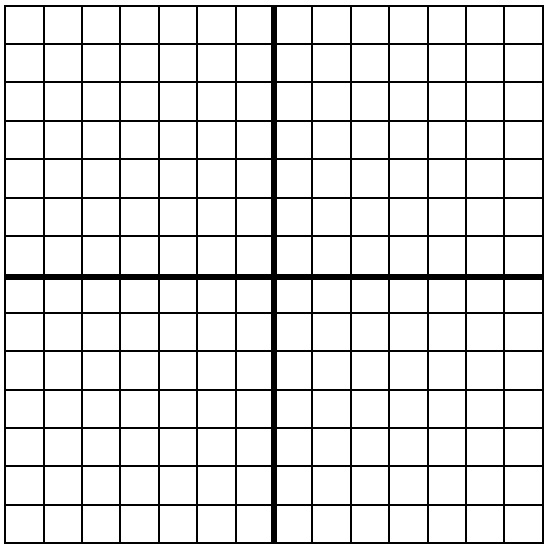
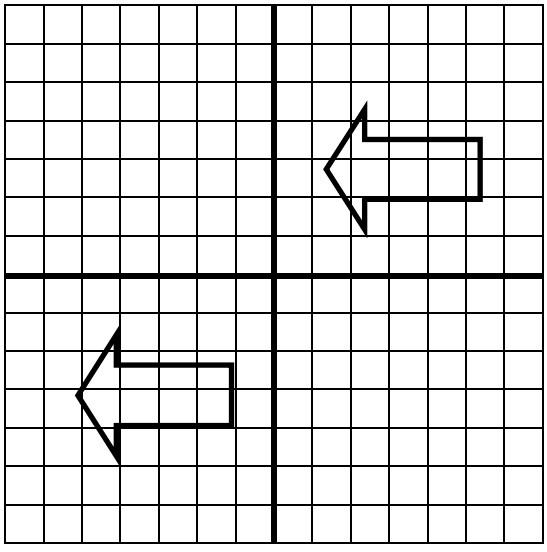
OBJECTIVE 3:
The student will demonstrate an understanding of geometry and spatial reasoning.

11. 7.6.d	Which of the following is NOT true about similar figures? A. Similar figures always have the same shape. B. Similar figures always have the same size. C. Similar figures always have corresponding angles. D. Similar figures always have corresponding sides that are proportional.	
12. 7.6.d	Look at the two rectangles below. Which method could be used to prove that the rectangles are similar?  A. Divide 3 by 2 and 4 by 1.5 to see whether the quotients are the same. B. Divide 1.5 by 4 and 2 by 3 to see whether the quotients are the same. C. Divide 4 by 1.5 and 2 by 3 to see whether the quotients are the same. D. Divide 3 by 1.5 and 4 by 2 to see whether the quotients are the same.	
13. 7.7.a	If the point below is translated 4 units to the left and 3 units down, what will point its new coordinates be?  A. (-2,0) B. (-1,-1) C. (6,0) D. (5,-1)	

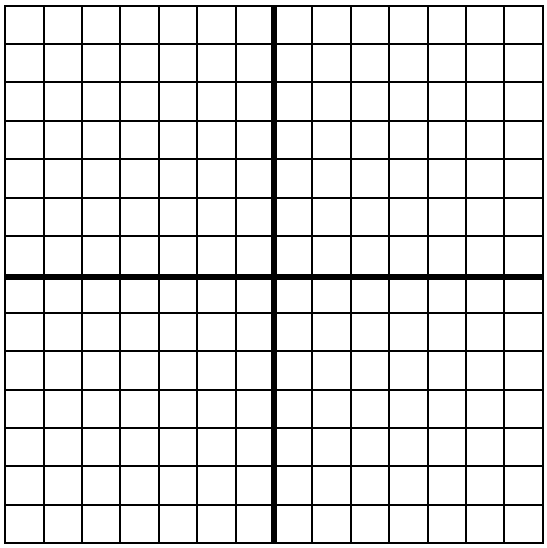
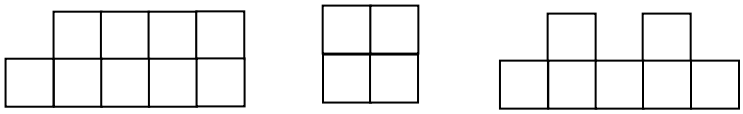
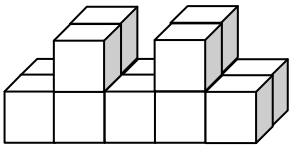
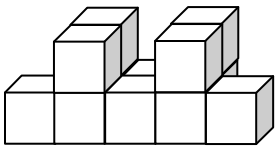
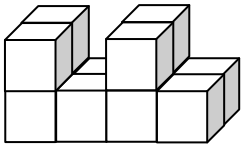
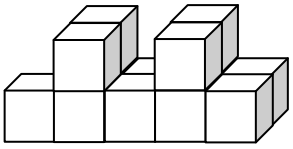
OBJECTIVE 3:
The student will demonstrate an understanding of geometry and spatial reasoning.

14. 7.7.a	Which of the following coordinates lie within the circle graphed below?  A. (2,3) B. (3,-5) C. (3,3) D. (5,3)	
15. 7.7.a	Which line contains the ordered pair (2,-3)?  A. Line *k* B. Line *l* C. Line *m* D. Line *n*	

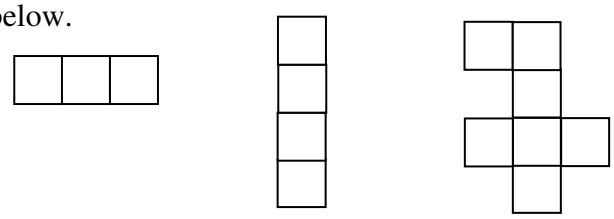
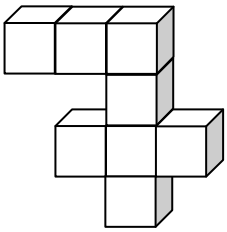
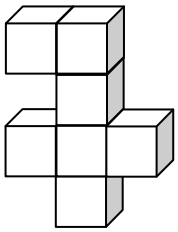
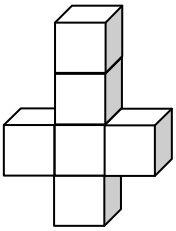
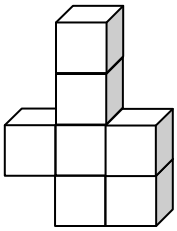
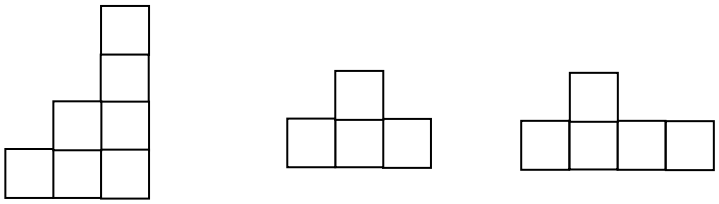
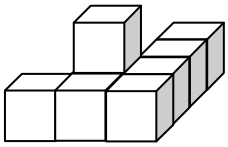
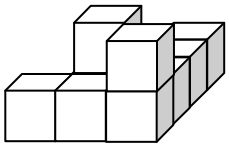
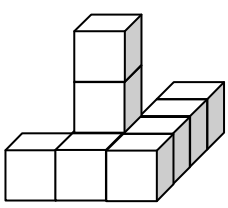
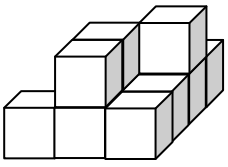
OBJECTIVE 3:
The student will demonstrate an understanding of geometry and spatial reasoning.

16. 7.7.b	Angela wants to translate polygon ABCD so that the vertex D is moved from coordinates (3,2) to coordinates (-3,-1). Identify the steps that can be used for the translation.  A. Move each vertex 6 units to the left and 3 units down. B. Move each vertex 6 units down and 3 units to the left. C. Move each vertex 3 units down and 1 unit to the left. D. Move each vertex 6 units to the left and 1 unit down.	
17. 7.7.b	The figure below was transformed from quadrant I to quadrant III.  The transformation best represents a – A. translation B. tessellation C. rotation D. refection	

OBJECTIVE 3:
The student will demonstrate an understanding of geometry and spatial reasoning.

18. 7.7.b	Beatrice translated trapezoid $RSTU$ to trapezoid $R'S'T'U'$. Vertex S was at (4,1). If vertex S' is at (-3,4), which best describes this translation?  A. Move 7 units left and 3 units up B. Move 1 unit left and 3 units up C. Move 3 units down and 7 units right D. Move 8 units left and 4 units up	
19. 7.8.a	The top, side, and front views of a solid figure made of cubes are shown below.  Top Side Front Which solid figure matches the views above? A.  B.  C.  D. 	

OBJECTIVE 3:
The student will demonstrate an understanding of geometry and spatial reasoning.

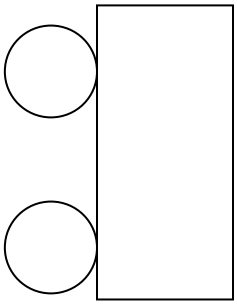
20. 7.8.a	The top, side, and front views of a solid figure made of cubes are shown below.  Top Side Front Which solid figure is best represented by these views? A.  B.  C.  D. 	
21. 7.8.a	The top, front, and side views of a solid figure made of cubes are shown below. Which solid figure is best represented by these views?  Top Front Side A.  B.  C.  D. 	

22.

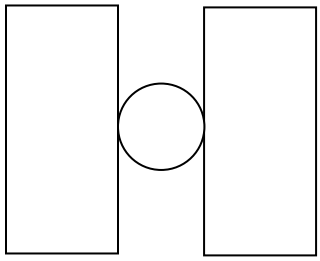
7.8.b

Which net can be used to make a cylinder?

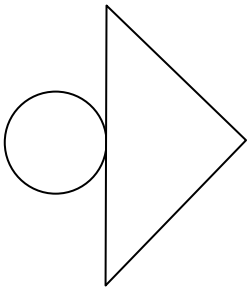
A.



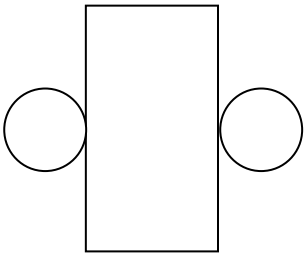
B.



C.



D.

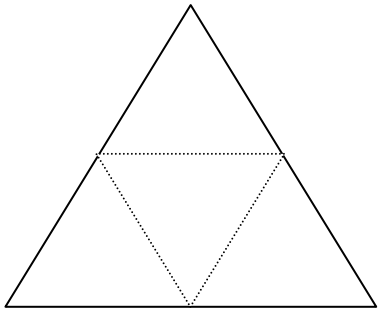


23.

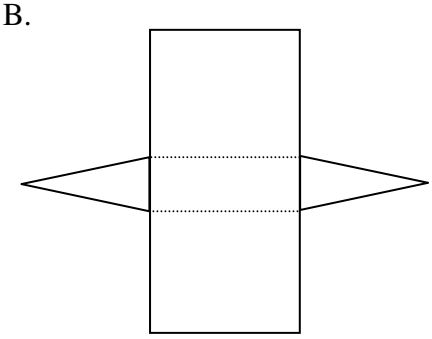
7.8.b

The final project inYasmeen's art class is to create a 3 dimensional triangular pyramid out of paper. Which net below could Yasmeen use to create a triangular pyramid?

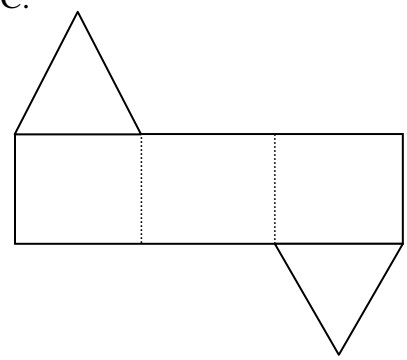
A.



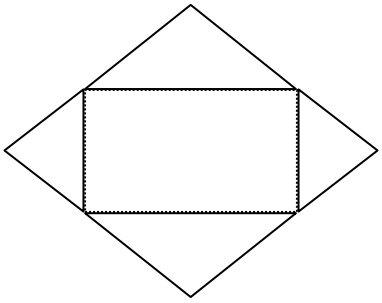
B.



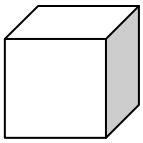
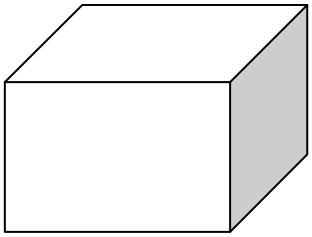
C.



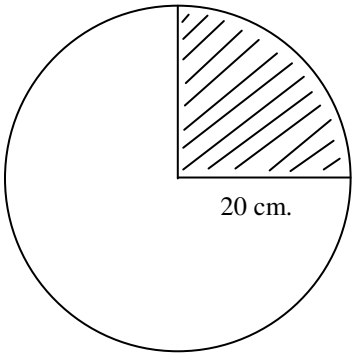
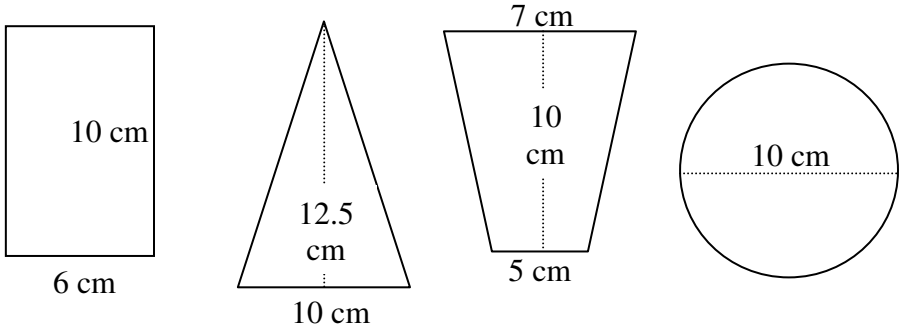
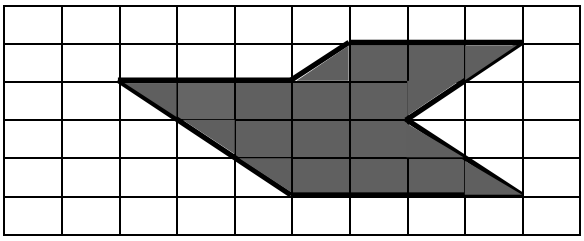
D.



OBJECTIVE 4:
The student will demonstrate an understanding of the concepts and uses of measurement.

1. 7.9.a	Find the exact number of cubes measuring 3 centimeters on an edge that will fill a box shaped like a rectangular prism that measures 24 centimeters by 18 centimeters by 9 centimeters.  3 cm by 3 cm by 3 cm 24 cm by 18 cm by 9 cm  A. 48 cubes B. 144 cubes C. 432 cubes D. 1296 cubes	
2. 7.9.a	A box is shown below. Use the ruler on the Mathematics Chart to measure the dimensions of the jewelry box in centimeters.  What is the volume of the box? Record your answer in the answer blank.	
3. 7.9.a	Kira drew a circle with a radius of 20 inches and another circle with a radius of 10 inches. What is the approximate difference between the areas of the 2 circles? A. 300 $in.^2$ B. 314 $in.^2$ C. 942 $in.^2$ D. 1,256 $in.^2$	

OBJECTIVE 4:
The student will demonstrate an understanding of the concepts and uses of measurement.

4. 7.9.a	Margarita traces a circle with a radius of 20 centimeters like the one shown below. She will color in the striped region.  What is the approximate area of the striped region? A. 90 cm^2 B. 270 cm^2 C. 314 cm^2 D. 1,256 cm^2	
5. 7.9.a	Cassie draws the following 4 figures.  Figure I Figure II Figure III Figure IV Which 2 figures have the same area? A. Figure I and Figure II B. Figure I and Figure III C. Figure II and Figure III D. Figure II and Figure IV	
6. 7.9.a	Bloom's Nursery designed a plan for Mrs. Hartwick's flower bed, as shown in the shaded part of the grid below.  Each square on the grid represents 5 square feet. What will be the approximate area of the flower bed? A. 100 $ft.^2$ B. 80 $ft.^2$ C. 20 $ft.^2$ D. 16 $ft.^2$	

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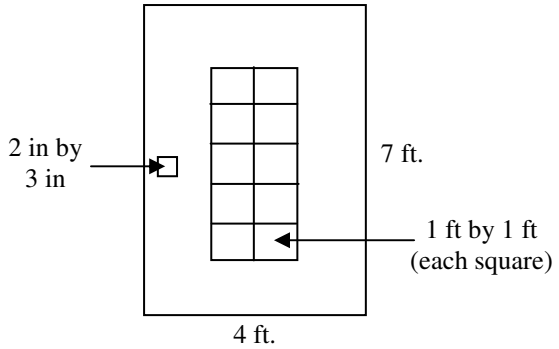
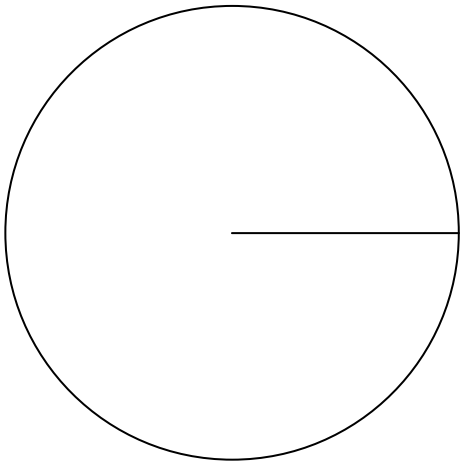
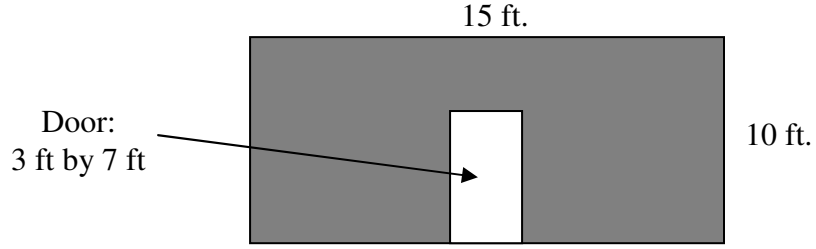
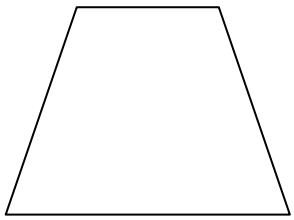
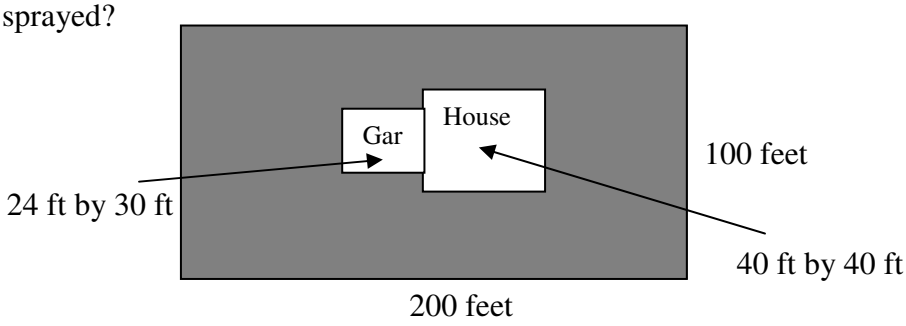
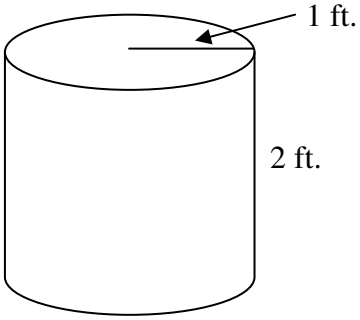
The student will demonstrate an understanding of the concepts and uses of measurement.

7. 7.9.a	Ms. Wagner painted the outside of the patio door to her house, as shown below. She did not paint the window or the doorknob. **PATIO DOOR**  Which is the closest to the painted area of the door in square feet? A. 31 ft.^{2} B. 28 ft.^{2} C. 25 ft.^{2} D. 18 ft.^{2}	
8. 7.9.a	Yoko made a circular coaster in pottery class. Use the ruler on the Mathematics Chart to measure the radius of the coaster in centimeters.  Which of the following is closest to the area of the top of the coaster? A. 27 ft.^{2} B. 28 ft.^{2} C. 36 ft.^{2} D. 19 ft.^{2}	
9. 7.9.a	Mrs. Jones wants to paint a wall but not the door on the wall.  How many square feet of wall does Mrs. Jones need to paint? A. 36 ft.^{2} B. 171 ft.^{2} C. 129 ft.^{2} D. 150 ft.^{2}	

OBJECTIVE 4:

The student will demonstrate an understanding of the concepts and uses of measurement.

10. 7.9.a	Mary needs to cut a piece of glass for her table. The table is in the shape of a regular hexagon. The glass should measure $1\frac{1}{2}$ ft. on each side. What is the perimeter of the piece of glass? A. 12 ft. B. 9 ft. C. 18 ft. D. 7.5 ft.	
11. 7.9.a	Brenda wants to attach a string of beads along the circular bottom edge of the lamp shade shown below. The diameter of the bottom of the lamp is 16 centimeters. About how many centimeters long should Brenda make the string of beads?  A. 25 cm B. 50 cm C. 79 cm D. 201 cm	
12. 7.9.a	A pest-controlled company was hired to spray the lawn represented by the shaded region shown below. What was the area in square feet that was sprayed?  A. 19,280 ft.^{2} B. 20,000 ft.^{2} C. 37,680 ft.^{2} D. 17,680 ft.^{2}	
13. 7.9.a	For storage Mrs. Lin uses cylindrical containers like the one shown below. If Mrs. Lin uses 2 of these containers, which is closest to the total volume of both containers?  A. 13 cubic feet B. 6 cubic feet C. 8 cubic feet D. 16 cubic feet	

OBJECTIVE 4:
The student will demonstrate an understanding of the concepts and uses of measurement.

14. 7.9.a	Jane ran in 3 races. The distances she ran in the races were 5 kilometers, 4.25 kilometers, and 5.5 kilometers. How many meters did Jane run in the 3 races altogether? A. 1,475 m B. 14,750 m C. 48,500 m D. 15,000 m	

7.9.b and 7.9.c were never tested.

Objective 4 Readiness Standards:

7.9.a, 7.9.c

OBJECTIVE 5:
The student will demonstrate an understanding of probability and statistics.

1.

7.10.a

There are 3 red marbles, 3 blue marbles, and 1 green marble in a bag. A marble is drawn at random and not replaced. Then a second marble is drawn.

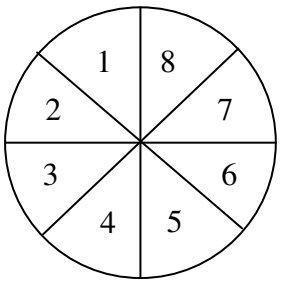
Which choice shows all the possible outcomes?

A. red/blue, red/green, blue/red, blue/green, green/red, green/blue
B. red/red, red/blue, red/green, blue/red, blue/blue, blue/green, green/red, green/blue, green/green
C. red/blue, red/green, blue/red, blue/green, green/red, green/green
D. red/red, red/blue, red/green, blue/red, blue/blue, blue/green, green/red, green/blue

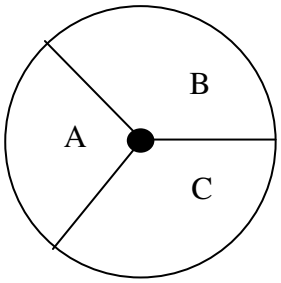
2.

7.10.a

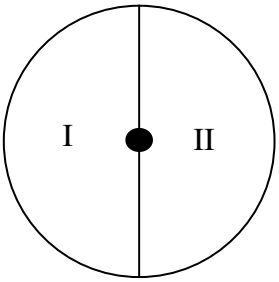
Lily played a game where she spun each of the spinners shown below once.



Spinner I



Spinner II



Spinner III

Which choice shows all the possible unique combinations of an odd number on Spinner I, an A or B on Spinner 2, and a II, on Spinner III?

A				B		
Spinner 1	Spinner 2	Spinner 3		Spinner 1	Spinner 2	Spinner 3
1	A	II		1	A	II
2	B	II		3	A	II
3	A	II		5	A	II
4	B	II		7	A	II
5	A	II		1	B	II
6	B	II		3	B	II
7	A	II		5	B	II
8	B	II		7	B	II

C				D		
Spinner 1	Spinner 2	Spinner 3		Spinner 1	Spinner 2	Spinner 3
1	A	II		1	A	I
3	B	II		3	A	II
5	A	II		5	A	I
7	B	II		7	A	II
1	A	II		1	B	I
3	B	II		3	B	II
5	A	II		5	B	I
7	B	II		7	B	II

OBJECTIVE 5:
The student will demonstrate an understanding of probability and statistics.

3. 7.10.A	Trent has 2 quarters, 1 dime, 2 nickels, and 1 penny in his pocket. Show all the possible outcomes if Trent chooses 3 coins at one time from his pocket.	
4. 7.10.a	Mrs. Sheldon made lunch for her family. She made tuna sandwiches and chicken sandwiches. She made coconut cookies and oatmeal cookies. Which list shows all possible outcomes if a person picked one sandwich at random and one cookie at random? A. (tuna, coconut), (chicken, oatmeal) B. (tuna, coconut), (chicken, coconut), (tuna, oatmeal), (chicken, oatmeal) C. (tuna, chicken), (tuna, coconut), (tuna, oatmeal), (chicken, tuna), (chicken, coconut), (chicken, oatmeal) D. (tuna, oatmeal), (chicken, oatmeal), (tuna, chicken), (coconut, oatmeal)	
5. 7.11.a	Star Junior High offers sports, clubs, and tutoring after school. Darnell surveyed 12 students to find out how many of these activities each student participated in. The results of the survey are shown in the table.	

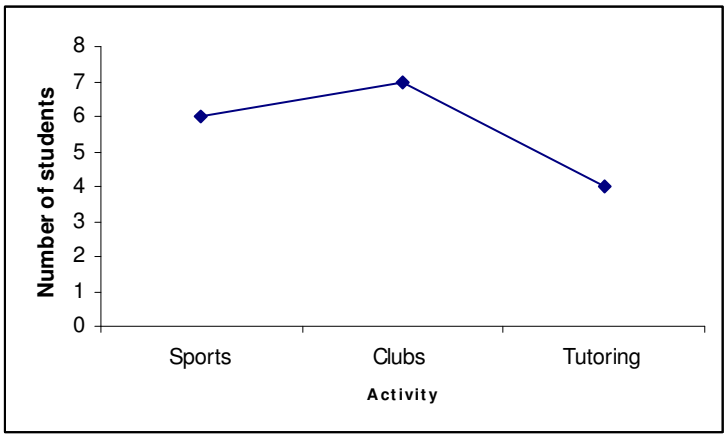
Name	**Activity**		
	Sports	**Clubs**	**Tutoring**
Bob	x		
Mary		x	
Dan		x	
Julio	x	x	
Cathy	x		x
Sara		x	x
Cindy	x	x	x
Margarita		x	
Ed	x		
Maria	x	x	
George			x
Shanda	x		x

Which graphic display on the next page best represents the data in the table?

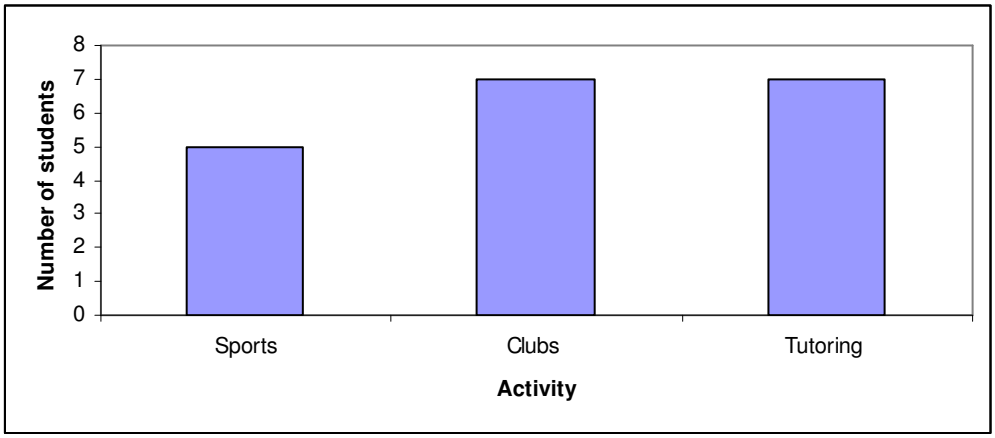
A.

Activity	Number of students
Sports only	2
Clubs only	2
Tutoring only	1
Sports and clubs only	2
Sports and tutoring only	1
Clubs and tutoring only	1
Sports, clubs, and tutoring	3

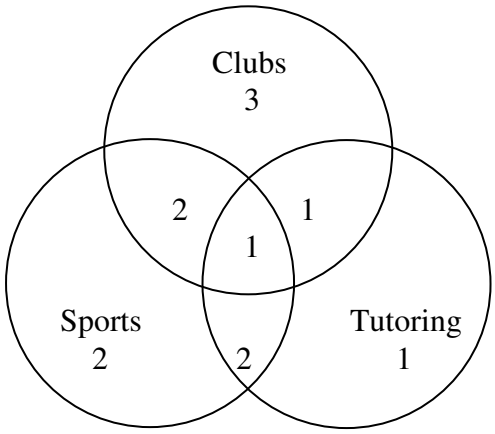
B.



C.



D.



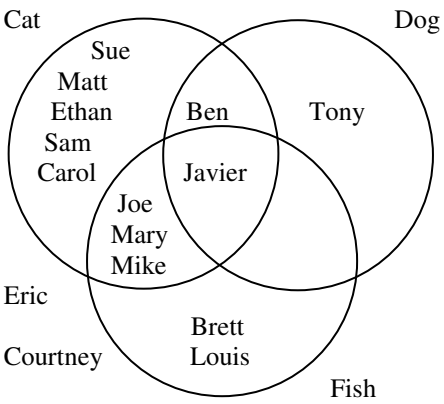
OBJECTIVE 5:
The student will demonstrate an understanding of probability and statistics.

6.

7.11.a

Aaron polled 15 classmates to find out what kinds of pets they have. Which of the following gives the most detailed information about individual students and their pets?

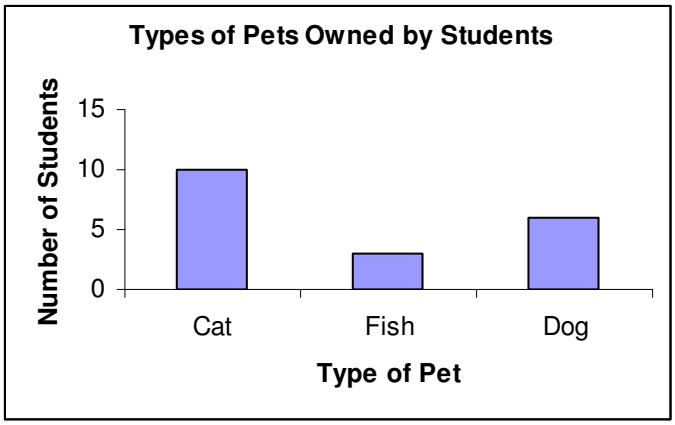
A. Types of Pets Owned by Students



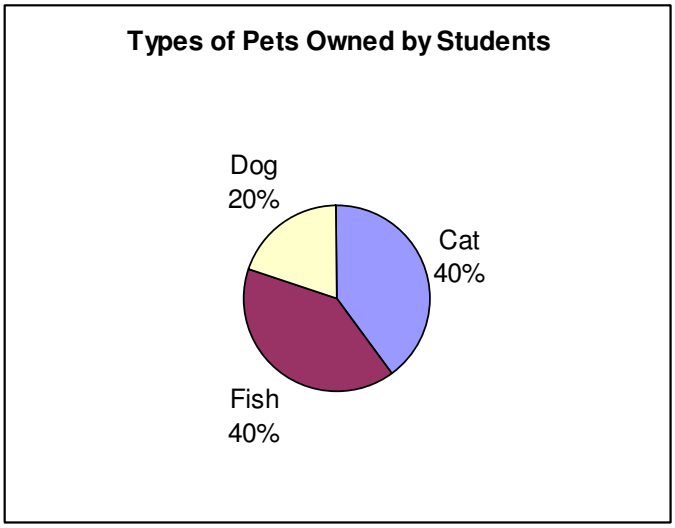
B. Types of Pets Owned by Students

Type of Pet	Number of Students
Cat	10
Fish	6
Dog	3

C.



D.



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The student will demonstrate an understanding of probability and statistics.

7.

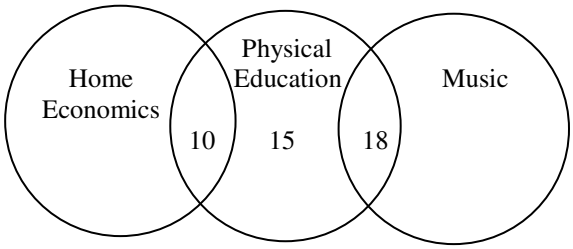
7.11.a

A counselor at Rosetta Middle School collected the following data about students taking elective courses.

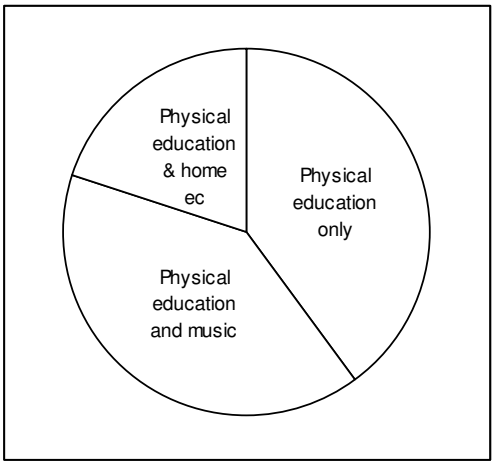
Course	Number of Students
Physical education only	15
Physical education and music	18
Physical education and home economics	10

Which graph best represents these data?

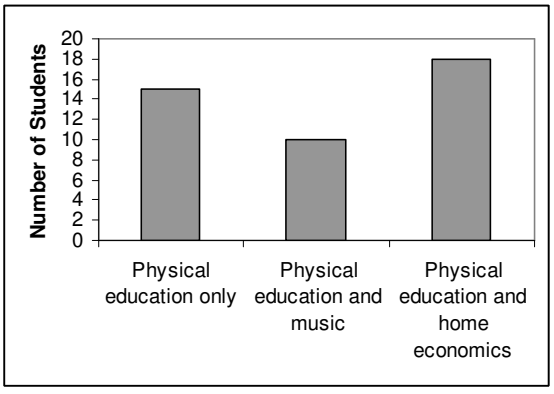
A.



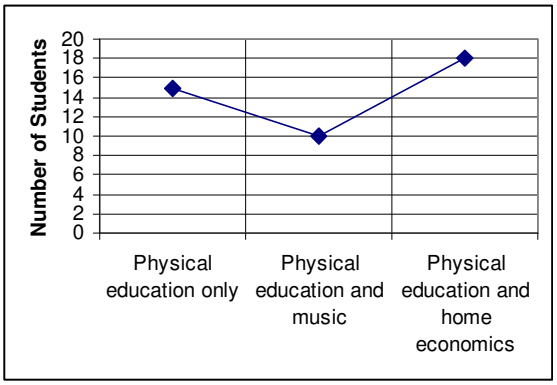
B.



C.



D.



OBJECTIVE 5:
The student will demonstrate an understanding of probability and statistics.

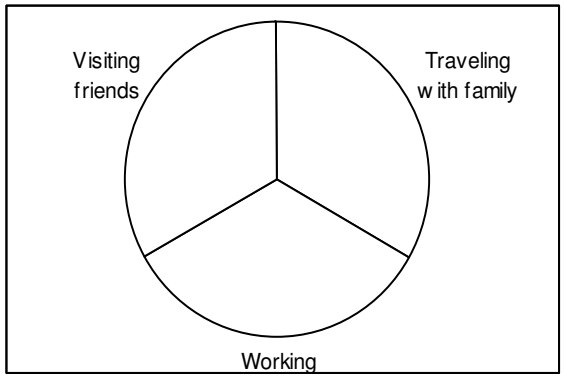
8.

7.11.
a

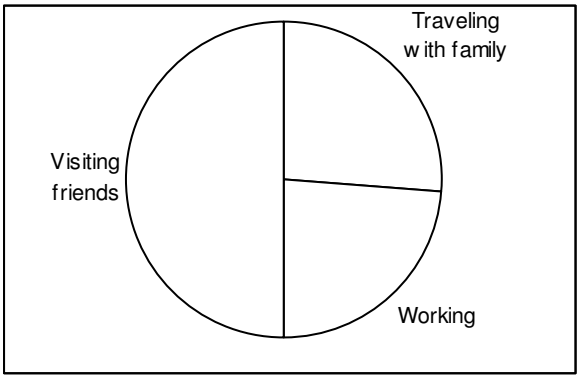
A survey asked 50 students which activities they like to participate in during the summer. The results of the survey are shown in the table below. Which circle graph best represents the data in the table?

Type of activity	Number of Students
Traveling with family	12
Working	13
Visiting friends	25

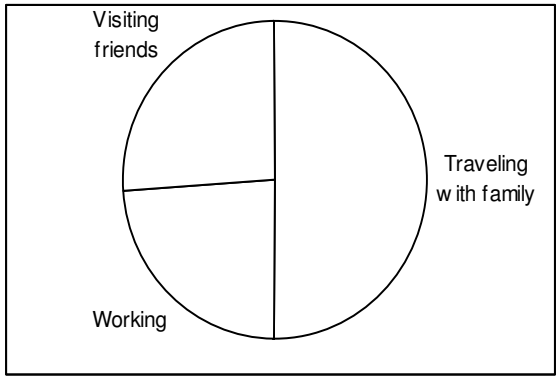
A.



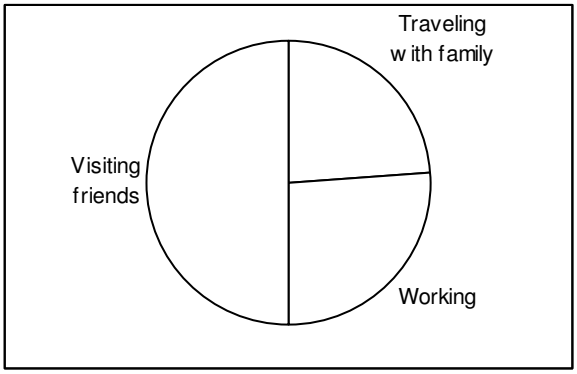
B.



C.



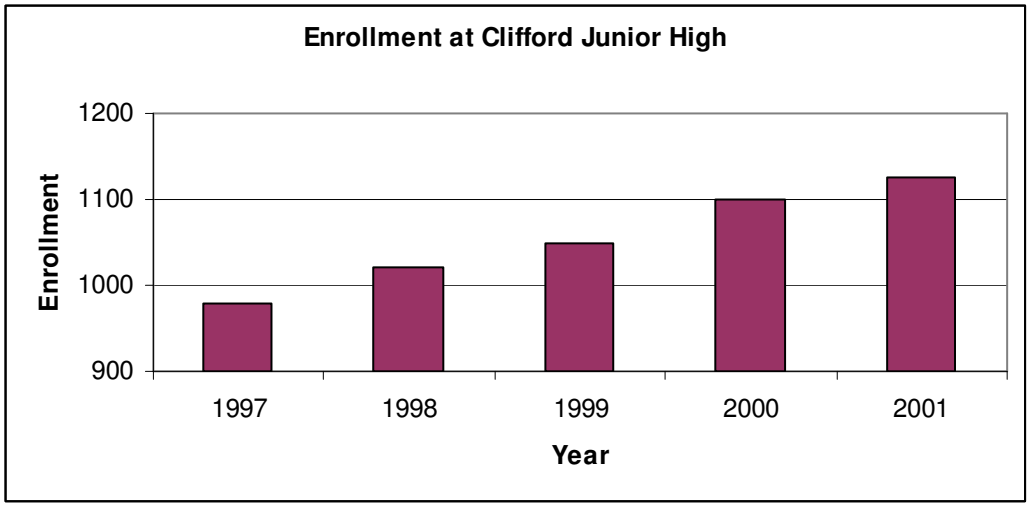
D.



9.

7.11.b

The enrollment at Clifford Junior High from 1997 to 2001 is shown below.



If the enrollment trend shown in the table continues, which is the best prediction of the enrollment at Clifford Junior High in 2004?

A. Fewer than 1,100
B. Between 1,200 and 1,300
C. Between 1,400 and 1,500
D. More than 1,500

10.

7.11.b

At Kingston Junior High School, 200 students were asked to name a career they would like to pursue. The results are shown in the table below.

Career	Number of students
Actor/actress	30
Athlete	40
Business Executive	70
Pilot	20
Politician	10
Musician	22
Teacher	8

Which of the following statements is supported by data in the table?

A. More than 25% of the students would like to pursue a career in acting or music.
B. The least number of students chose teaching because of the college preparation required.
C. The mode of the data is 30.
D. Exactly 10% of the students would like to pursue a career in politics.

OBJECTIVE 5:
The student will demonstrate an understanding of probability and statistics.

11.

7.11.b

The table shows the number of blue-plate special sold at a diner each day last week.

Day of the Week	Number of Orders
Saturday	95
Sunday	87
Monday	35
Tuesday	27
Wednesday	31
Thursday	39
Friday	50

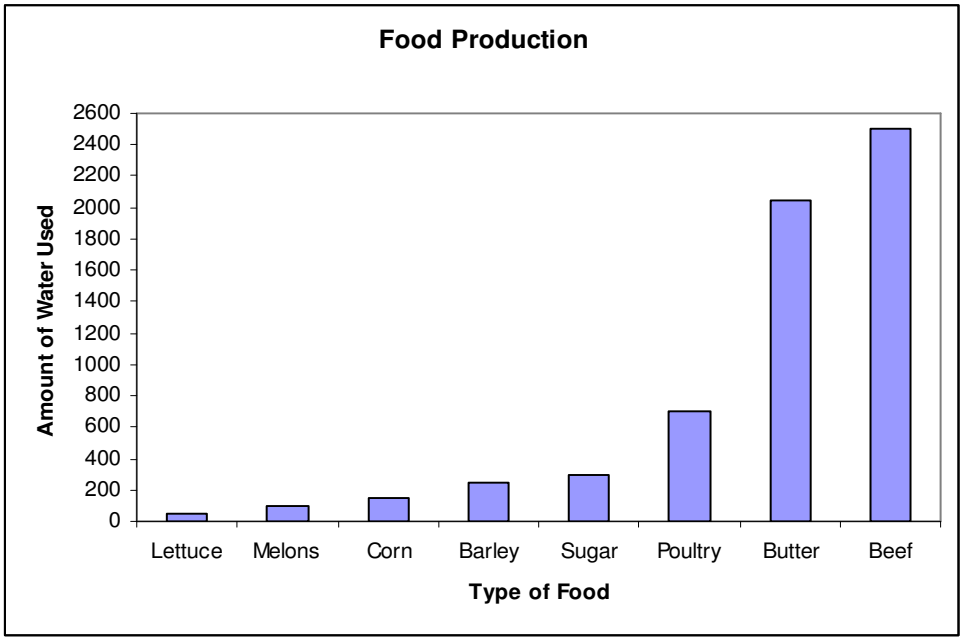
Which statement is NOT supported by these data?

A. There were almost 3 times as many orders placed on Sunday as on Wednesday.
B. There were almost twice as many orders placed on Saturday as on Friday.
C. The total number of orders placed on weekdays equals the number of orders placed over the weekend.
D. The average number of orders placed per day was 42.

12.

7.11.b

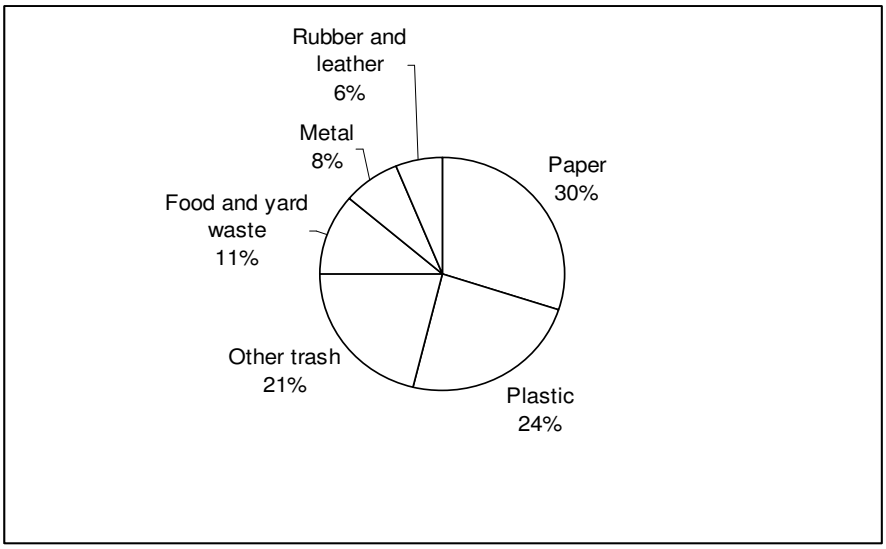
The graph below shows the number of gallons of water used to produce a pound of various types of food.



Which statement is best supported by these data?

A. Lettuce takes $\frac{1}{2}$ as much water to grow as melons do.
B. Beef production uses more water than the production of all other food combined.
C. It takes nearly 3 times the amount of water to produce a pound of poultry as it does to produce a pound of sugar.
D. It takes the same amount of water to produce a pound of sugar or a pound of barley.

OBJECTIVE 5:
The student will demonstrate an understanding of probability and statistics.

13. 7.11.b	The circle graph below shows the materials in US landfills. Which of the following statements is NOT supported by the graph?  A. Paper and other trash make up more than half of US landfills. B. Rubber and leather and food and yard waste make up $\frac{1}{4}$ of US landfills. C. The amount of plastic is triple the amount of metal in US landfills. D. The amount of paper is more than twice the amount of metal in US landfills.	
14. 7.11.b	The data in the table below show the number of lunch items sold at a school snack bar in one day. Which statement is best supported by these data? **Lunch item** / **Number sold** Slice of pizza: 170 Hamburger: 80 Nachos: 130 Regular milk: 200 Chocolate milk: 110 A. There are a total of 690 students attending classes at the school. B. The number of students who bought hamburgers is 50% of the number of students who bought nachos. C. There are 300 students at the school who do not like hamburgers. D. The number of students who bought chocolate milk is 55% of the number of students who bought regular milk.	

OBJECTIVE 5:
The student will demonstrate an understanding of probability and statistics.

15.

7.11.b

Lisa's principal kept a record of the times Lisa's school bus arrived at school. The table below shows the percent of time that the bus arrived on time or was late. Which statement is best supported by the data in the table?

Arrival Times	Percent of Time
On time	40
1 second to 5 minutes late	30
5 minutes to 10 minutes late	20
More than 10 minutes late	10

A. The bus was late a higher percent of the time than it was on time.
B. The bus was late less than half the time.
C. The bus was between 1 second and 5 minutes late most of the time.
D. The bus was more than 10 minutes late most of the time.

16.

7.12.a

The table below shows that 7 students charge per hour for tutoring.

Tutor	Fee per Hour
Lee	$3.25
Mick	$4.50
Andreas	$4.00
Cyndi	$4.50
Dirk	$3.75
Glenda	$4.75
Kristen	$4.25

What is the median fee per hour for tutoring by these students?
A. $1.50
B. $4.15
C. $4.25
D. $4.50

17.

7.12.a

Coach Reyna recorded the times of six of her runners in the 100-meter dash. The results are shown below.

Runner	Time (seconds)
L. Chavez	11.92
M. Hines	11.34
S. Williams	12.01
J. Smith	12.15
P. Madison	11.82
T. Montes	11.34

What is the range of the times and the median time for these six runners?
A. Range = 0.58 sec and Median = 12.08 sec
B. Range = 0.58 sec and Median = 11.34 sec
C. Range = 0.81 sec and Median = 11.76 sec
D. Range = 0.81 and Median = 11.87 sec

OBJECTIVE 5:
The student will demonstrate an understanding of probability and statistics.

18. 7.12.a	In which data set is the mean, median, mode, and range all the same number? A. {1, 2, 3, 3, 2, 1, 2} B. {1, 2, 3, 1, 2, 3, 1} C. {1, 3, 3, 3, 2, 3, 1} D. {2, 2, 1, 2, 3, 2, 3}	
19. 7.12.a	Mr. Haskell bought 7 calves for $3,500.00. He later bought another calf for $660.00. What was the mean cost of all the calves? A. $355.00 B. $500.00 C. $520.00 D. $4,160.00	
20. 7.12.a	Terri collected data on the number of cans donated by each homeroom in her grade for a food drive. The table below shows the results of the food drive. **Homeroom Teacher** / **Number of cans** Mr. Campbell: 45 Mrs. Padilla: 63 Ms. Pogue: 92 Mrs. Malmgren: 27 Mr. Dawson: 115 Ms. Morgan: Which number could be added to the set of data in order for the median and mode of the set to be equal? A. 54 B. 63 C. 80 D. 88	
21. 7.12.a	Randy and his 5 friends played a card game in which the person with the lowest final score wins. The table below shows the final scores for all the players except Erica. If Erica won the game and the range of the scores was 17, what was Erica's score? **Player** / **Score** Randy: 121 Erica: John: 119 Sam: 107 Dawn: 123 Maya: 112 A. 104 B. 106 C. 140 D. 124	
22. 7.12.a	Patrice records the number of calories she burns while exercising each day, as shown below. Day 1: 250 calories, Day 2: 350 calories, Day 3: 400 calories, Day 4: 250 calories, Day 5. 300 calories How many calories must Patrice burn on the sixth day to have a mean of 300 calories burned for the 6 days? A. 0 calories B. 150 calories C. 250 calories D. 310 calories	

OBJECTIVE 5:
The student will demonstrate an understanding of probability and statistics.

23.

7.12.b

Mr. Gordon asked 39 students how many times they used the dictionary last week in his class. The responses are shown in the table.

Number of times used	Number of students
5	3
6	5
7	7
8	12
9	8
10	4

Which measure of the data represents the most common number of times the students used the dictionary?

A. Mean
B. Median
C. Mode
D. Range

24.

7.12.b

Timothy collected the following data during a science experiment.

Trial	Time (seconds)
1	18
2	11
3	15
4	11
5	13
6	11

Which measure of data is represented by 12 seconds?

A. Mean
B. Mode
C. Median
D. Range

7.10.b was never tested.

Objective 4 Readiness Standards:

7.11.b, 7.12.b

OBJECTIVE 6:
The student will demonstrate an understanding of the mathematical process and tools used in problem solving.

<table>
<tr><td>1.

7.13.a</td><td>Manny made a rectangular garden in his backyard. The garden was 24 feet long and 10 feet wide. Manny used $\frac{1}{3}$ of the garden space to grow vegetables. He built a 3 foot high fence around the garden to keep his dog out of the garden. Determine which of the following questions could NOT be answered with the information provided.

A. What is the perimeter of the garden?
B. What was the total area of the garden?
C. What was the volume of dirt in the garden?
D. What was the area of space used for growing vegetables?</td><td></td></tr>
<tr><td>2.

7.13.a</td><td>Susan has 3 siblings: Ted, Kathy, and Jake. Susan in older than Jake. Ted is younger than both his sisters but older than his brother. What information is needed to determine the order of the siblings from oldest to youngest?

A. Is Kathy older or younger than Ted?
B. Is Jake older or younger than Susan?
C. Is Susan older or younger than Kathy?
D. Is Ted older or younger than Jake?</td><td></td></tr>
<tr><td>3.

7.13.a</td><td>The net profit of a company for each of 5 consecutive years is shown in the table.

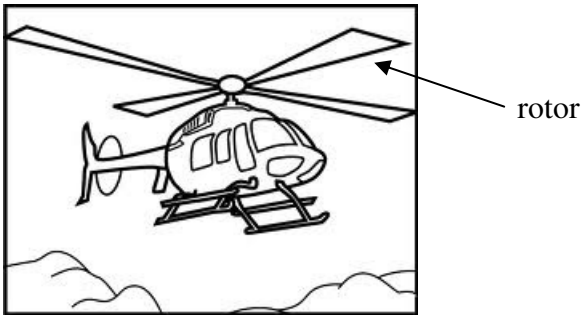
<table><tr><th>Year</th><th>Net Profit (millions of dollars)</th></tr><tr><td>1984</td><td>12.5</td></tr><tr><td>1985</td><td>14.6</td></tr><tr><td>1986</td><td>13.1</td></tr><tr><td>1987</td><td>14.5</td></tr><tr><td>1988</td><td>12.2</td></tr></table>
Which statement is best supported by the information in the table?

A. The net profit in 1987 was 20% greater than the net profit in 1986.
B. The greatest increase in net profit for 2 consecutive years occurred from 1984 to 1985.
C. The greatest decrease in net profit for 2 consecutive years occurred from 1985 to 1986.
D. The sum of the net profits for 1984 and 1985 was greater than the sum of the net profits for 1986 and 1987.</td><td></td></tr>
<tr><td>4.

7.13.a</td><td>Mrs. Vega needed to make 2 costumes for a school play. The larger costume required $4\frac{1}{4}$ yards of material, and the smaller costume required $\frac{3}{4}$ yard less than the larger one. Which equation can be used to find n, the number of yards of material needed for the smaller costume.

A. $4\frac{1}{4}+\frac{3}{4}$ B. $4\frac{1}{4}\bullet\frac{3}{4}$ C. $4\frac{1}{4}\div\frac{3}{4}$ D. $4\frac{1}{4}-\frac{3}{4}$</td><td></td></tr>
</table>

OBJECTIVE 6:
The student will demonstrate an understanding of the mathematical process and tools used in problem solving.

5. 7.13.a	Ms. Abbot went on a road trip. The trip was 792 miles, and the average price of gasoline was $1.30 per gallon. What information is needed to find the amount Ms. Abbot spent on gasoline for the trip? A. Number of hours the trip took B. Number of miles per hour the car traveled C. Average number of miles the car traveled per gallon of gasoline D. Average number of miles Ms. Abbot drove per day	
6. 7.13.a	A farmer knows the length and width of his rectangular pasture. He also knows how many pounds of fertilizer to spread per square yard. What additional information does the farmer need to know in order to determine the number of bags of fertilizer he should buy? A. The type of grass in the pasture B. The number of bags of fertilizer his truck will hold C. The price of each bag of fertilizer D. The number of pounds of fertilizer in each bag	
7. 7.13.a	The drawing below shows the rotor of a helicopter. This helicopter has a rotor that moves at a rate of 500 spins per minute while flying. Which statement is best supported by this information?  A. The helicopter rotor will spin 2,000 times in 40 minutes. B. The helicopter rotor will spin 4,000 times before lifting the helicopter off the ground. C. The helicopter rotor will spin 15,000 times in 3 minutes. D. The helicopter rotor will spin 30,000 times in 1 hour.	
8. 7.13.b	Identify the equation below that models $a^b \bullet a^c = a^{b+c}$. A. $3^2 \bullet 3^4 = 9^6$ B. $3+3+3+3+3+3=3^6$ C. $3 \bullet 3+3 \bullet 3 \bullet 3 \bullet 3=3^6$ D. $3^2 \bullet 3^4 = 3^6$	

OBJECTIVE 6:
The student will demonstrate an understanding of the mathematical process and tools used in problem solving.

<table>
<tr>
<td>9.

7.13.b</td>
<td>An equilateral triangle is divided into 4 congruent equilateral triangles. What method can be used to find the area of the larger equilateral triangle, given the area of one of the smaller triangles?

A. Multiply the area of the larger equilateral triangle by 4
B. Multiply the area of one congruent equilateral triangle by 4
C. Subtract the area of one congruent triangle from the area of the larger equilateral triangle
D. Add the area of the larger equilateral triangle to the areas of the 4 congruent equilateral triangles</td>
<td></td>
</tr>
<tr>
<td>10.

7.13.b</td>
<td>Mr. Palmer started a new business and hired 12 employees. A list of the employees and their hourly wage is shown below.

<table>
<tr><th>Employee Number</th><th>Hourly Wage</th></tr>
<tr><td>774</td><td>$8.25</td></tr>
<tr><td>846</td><td>$6.25</td></tr>
<tr><td>616</td><td>$7.25</td></tr>
<tr><td>271</td><td>$9.15</td></tr>
<tr><td>806</td><td>$8.95</td></tr>
<tr><td>435</td><td>$7.25</td></tr>
</table>
<table>
<tr><th>Employee Number</th><th>Hourly Wage</th></tr>
<tr><td>736</td><td>$7.25</td></tr>
<tr><td>248</td><td>$9.15</td></tr>
<tr><td>192</td><td>$7.50</td></tr>
<tr><td>329</td><td>$8.60</td></tr>
<tr><td>685</td><td>$8.25</td></tr>
<tr><td>377</td><td>$6.95</td></tr>
</table>
What should Mr. Palmer do to organize the data in order to identify which employees earn less than the median hourly wage?

A. He should add up all the hourly wages.
B. He should list the employee numbers in order from greatest to least.
C. He should list the hourly wages in order from least to greatest with their corresponding employee numbers.
D. He should list the employee numbers in order from least to greatest with their corresponding hourly wages.</td>
<td></td>
</tr>
<tr>
<td>11.

7.13.b</td>
<td>Hilda bought 4 orders of french fries at $0.67 each, 3 hamburgers at $1.28 each, and 4 shakes at $2.25 each. She paid 8.25% tax on the whole order. What other information is necessary to find Hilda's correct change?

A. Total cost of the order
B. Amount she paid in tax
C. Amount she gave the cashier
D. Reason for buying the food</td>
<td></td>
</tr>
</table>

OBJECTIVE 6:
The student will demonstrate an understanding of the mathematical process and tools used in problem solving.

12. 7.13.b	Stephanie makes cocoa mix to sell at the winter fair. She makes 230 cups of one flavor of cocoa mix and 180 cups of another flavor. To package the cocoa mix, Stephanie needs to purchase containers that hold 2 cups each. The containers are sold in boxes of 50. Which would be the correct order for Stephanie to do the following steps to find the number of boxes of containers she needs to buy? Step R: Divide the total number of cups of cocoa mix by 2. Step S: Find the sum of the numbers of cups of the two different types of cocoa mix. Step T: Divide the number of containers needed by 50 to find the number of boxes of containers to buy. A. R, S, T B. S, R, T C. T, R, S D. R, T, S	
13. 7.13.c	Jeffrey spent $\frac{1}{2}$ of his Saturday earnings on a pair of shoes and $\frac{1}{2}$ of the remaining amount on a DVD. After he spent \$5.35 on lunch, he had \$10.85 left. How much did Jeffrey earn on Saturday? A. \$32.25 B. \$36.45 C. \$60.40 D. \$64.80	
14. 7.13.c	ΔRST and ΔJKL are similar. Which choice shows the equation that can be used to find the area of ΔJKL? A. First use $\frac{9}{18}=\frac{h}{12}$ and then use area = $\frac{1}{2}(12h)$ B. First use $\frac{9}{18}=\frac{h}{12}$ and then use area = $(12h)$ C. First use $\frac{9}{18}=\frac{12}{h}$ and then use area = $\frac{1}{2}(12h)$ D. First use $\frac{9}{18}=\frac{12}{h}$ and then use area = $(12h)$	
15. 7.13.c	Laura is trying to figure out the heights of 3 people. Here are the facts she knows: ▪ The sum of the heights of these 3 people is 17 feet 5 inches. ▪ The shortest person is 5 feet 4 inches tall. ▪ The other 2 people differ in height by 3 inches. How tall is the tallest person? A. 5 feet 4 inches B. 5 feet 1 inches C. 6 feet 2 inches D. 12 feet 1 inch	

OBJECTIVE 6:
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16. 7.14.a	Pilar spends a total of 60 hours per week at school and at her job. She attends school from 8:45 AM until 3:45 PM, Monday through Friday. Which equation can be used to find *t*, the maximum number of hours Pilar works at her job each week? A. $t = 60 - (5 \times 7)$ B. $t = 60 - (5 \times 8)$ C. $t = 60 - 7 + 7 + 7 + 7 + 7$ D. $t = 5 \times 7 - 60$	
17. 7.14.a	Which expression can be used to solve the problem below? To cater a luncheon, a hotel charges $50 per hour for use of a dining room plus $24.50 per person. What is the total cost for a 2-hour luncheon for 45 people? A. $2 \times 50 + 24.50 + 45$ B. $2 \times 50 + 24.50 \times 45$ C. $2 \times 24.50 + 50 \times 45$ D. $2 \times 45 + 50 \times 24.50$	
18. 7.14.a	Luis is in charge of making props for a school play. He needs to make a large circular wooden clock that measures about 6 feet in circumference. Which equation can he use to find *r*, the radius of the clock? A. $r = \frac{6}{\pi}$ B. $r = \frac{12}{\pi}$ C. $r = \frac{6}{2\pi}$ D. $r = \frac{12}{2\pi}$	
19. 7.14.a	Mr. Cohen used 25 kilograms of fertilizer on his lawn. The fertilizer contained 2 kilograms of nitrogen. Which equation can be used to find x, the percent of nitrogen in the fertilizer Mr. Cohen used? A. $\frac{x}{100} = \frac{2}{25}$ B. $\frac{x}{100} = \frac{25}{2}$ C. $\frac{x}{2} = \frac{27}{100}$ D. $\frac{25}{27} = \frac{x}{100}$	
20. 7.14.a	A sports-shop owner bought some baseball cards and then sold them for $7.50 each. He sold 150 cards on Monday and 82 cards on Tuesday. What piece of information is needed to find the amount of profit he made from the sale of the baseball cards on Monday and Tuesday? A. How much the shop owner paid for the baseball cards B. Number of cards sold on Wednesday C. Total number of cards sold D. Number of football cards bought by the shop owner	

OBJECTIVE 6:
The student will demonstrate an understanding of the mathematical process and tools used in problem solving.

21. 7.14.a	Arthur uses his own tractor while doing various jobs. He is paid a flat fee of $100 for each job. In addition to the flat fee, he is paid $20 for each hour he works with the tractor. Which shows how to find the amount Arthur should be paid for working with the tractor for 10 hours? A. Add 20 to 10 and then multiply the sum by 100 B. Multiply 100 by 10 and then add 20 to the product C. Multiply 20 by 10 and then add 100 to the product D. Add 20 to 100 and then multiply the sum by 100	
22. 7.14.a	Ed is reading the math problem shown below. $1.6\overline{)3.2}$ Which is the correct way to read this problem? A. One and six tenths divided by three and two tenths B. Three and two tenths divided by one and six tenths C. Three and two hundredths divided by one and six hundredths D. One and six hundredths divided by three and two hundredths	
23. 7.15.a	Mrs. Cotera wants to estimate the monthly operating expenses for the car she just bought, not including maintenance and repairs. Insurance will cost about $200 per month, and Mrs. Cotera expects to drive an average of 225 miles per week. What additional information does she need to estimate her monthly operating expenses? A. The cost of fuel and the one-way distance to work B. The cost of fuel and the number of miles per gallon her car gets C. The cost of fuel and her weekly take-home pay D. The number of gallons of fuel needed per week	
24. 7.15.a	Mr .Zimmerman started a 6-week exercise program. The first week he jogged 1 mile each day, the second week he jogged $1\frac{1}{4}$ miles each day. If the pattern continues, how far will he jog each day of the sixth week? A. $1\frac{1}{4}$ miles B. $2\frac{1}{4}$ miles C. 6 miles D. $9\frac{3}{4}$ miles	

OBJECTIVE 6:
The student will demonstrate an understanding of the mathematical process and tools used in problem solving.

25.

7.15.a

The table below shows the favorite sports of the students at Tompkins Middle School.

Sport	Number of Students
Cycling	950
Swimming	900
Basketball	675
Volleyball	450

Based on the information in the table, which of the following is a reasonable assumption?

A. About 3 times as many students like cycling as volleyball.
B. Swimming is almost twice as popular as basketball.
C. About 2 times as many students like swimming as volleyball.
D. Volleyball is the most popular sport.

26.

7.15.a

The numbers in Set R share a common characteristic.

Set R: 48, 54, 6, 66, 12, 24

The numbers in Set S do not share this characteristic.

Set S: 9, 20, 39, 15, 63, 27, 44

Which best describes the characteristic that only the numbers in Set R share?

A. Numbers less than 70
B. Numbers greater than 5
C. Numbers that are composite
D. Numbers that are divisible by 6

27.

7.15.b

Mrs. Flores gave her seventh-grade math class two sets of numbers that were sorted according to a certain rule. The numbers that followed the rule were put in Set A, and the numbers that did not follow the rule were put in Set B.

Set A	34.23, 42.65, 430.17, 101.49, 1,635.09
Set B	216.1, 2.365, 2.2, 6,465, 949.508

Based on this information, all the numbers in Set A –

A. have exactly four non-zero digits
B. include the digit 2
C have odd numbers in the ones place
D. are written to the hundredths place

OBJECTIVE 6:
The student will demonstrate an understanding of the mathematical process and tools used in problem solving.

<table>
<tr>
<td>28.

7.15.b</td>
<td>Mr. Jenkins wants to buy some rosebushes for his garden. There are four stores in his neighborhood currently having sales on rosebushes.

<table>
<tr><th>Store</th><th>Sale Price</th></tr>
<tr><td>Sheldon’s Plant Mart</td><td>4 rosebushes for $11.90</td></tr>
<tr><td>Rose Mart</td><td>3 rosebushes for $8.95</td></tr>
<tr><td>Kathleen’s Roses</td><td>2 rosebushes for $5.90</td></tr>
<tr><td>Rose Heaven</td><td>1 rosebush for $2.96</td></tr>
</table>

If Mr. Jenkins wants to save as much money as possible, at which store should he shop?

A. Sheldon’s Plant Mart, because he wants to buy 4 rosebushes
B. Rose Mart, because each rosebush costs almost $3.00
C. Kathleen’s Roses, because each rosebush costs $2.95
D. Rose Heaven, because the selection is better</td>
<td></td>
</tr>
<tr>
<td>29.

7.15.b</td>
<td>Mrs. Blackburn wrote the following riddle on the board for her mathematics class.

We are 2-digit numbers. Our greatest common factor is 16. Our difference is 48. Our sum is 112.

What are the 2 numbers of the riddle?

A. 16 and 48, because their greatest common factor is 16
B. 32 and 80, because their difference is 48 and their greatest common factor is 16
C. 16 and 64, because their difference is 48 and their greatest common factor is 16
D. 48 and 96, because their difference is 48</td>
<td></td>
</tr>
<tr>
<td>30.

7.15.b</td>
<td>A 10-ounce box of cereal costs $2.98, and a 20-ounce box of the same cereal costs $5.49. Which of these statements will help a shopper decide which box is the better buy?

A. The 10-ounce box is the better buy because it is less expensive per ounce of cereal.
B. The 20-ounce box is the better buy because it is more expensive per ounce of cereal.
C. The 10-ounce box is the better buy because $2.98 is about $3, and $3 goes into $5.49 about 3 times.
D. The 20-ounce box is the better buy because two of the 10-ounce boxes cost more than one 20-ounce box.</td>
<td></td>
</tr>
</table>

7.13.d was never tested.

All of these are process standards.

Created by Lance Mangham, 6th grade math teacher, Carroll ISD