

7th Grade STAAR Test Prep

Mr. Mangham's Math Class

HMH Texas Test Prep Questions

Name: _____

Linear Equations

Slope-intercept form $y = mx + b$

Direct Variation $y = kx$ (8th grade)

Constant of proportionality $k = \frac{y}{x}$

Slope of a line $m = \frac{y_2 - y_1}{x_2 - x_1}$ (8th grade)

Circumference Circle $C = 2\pi r$ or $C = \pi d$

Area

Rectangle $A = bh$

Trapezoid $A = \frac{1}{2}(b_1 + b_2)h$

Parallelogram $A = bh$

Circle $A = \pi r^2$

Triangle $A = \frac{bh}{2}$ or $A = \frac{1}{2}bh$

Surface Area (8 th grade)	Lateral	Total
Prism	$S = Ph$	$S = Ph + 2B$
Cylinder	$S = 2\pi rh$	$S = 2\pi rh + 2\pi r^2$

Volume

Triangular prism $V = Bh$

Cylinder $V = Bh$ or $V = \pi r^2 h$ (8th grade)

Rectangular prism $V = Bh$

Cone $V = \frac{1}{3}Bh$ or $V = \frac{1}{3}\pi r^2 h$ (8th)

Pyramid $V = \frac{1}{3}Bh$

Sphere $V = \frac{4}{3}\pi r^3$ (8th grade)

Pi $\pi \approx 3.14$ or $\pi \approx \frac{22}{7}$

Distance $d = rt$	Compound Interest $A = P(1 + r)^t$
Simple Interest $I = prt$	Pythagorean Theorem $a^2 + b^2 = c^2$ (8 th grade)

<p>Customary – Length 1 mile = 1760 yards 1 yard = 3 feet 1 foot = 12 inches</p>	<p>Customary – Volume/Capacity 1 pint = 2 cups 1 cup = 8 fluid ounces 1 quart = 2 pints 1 gallon = 4 quarts</p>	<p>Customary – Mass/Weight 1 ton = 2,000 pounds 1 pound = 16 ounces</p>
<p>Metric – Length 1 kilometer = 1000 meters 1 meter = 100 centimeters 1 centimeter = 10 millimeters</p>	<p>Metric – Volume/Capacity 1 liter = 1000 milliliters</p>	<p>Metric – Mass/Weight 1 kilogram = 1000 grams 1 gram = 1000 milligrams</p>

Day 1 Mixed Review

1.	<p>What is $-7\frac{5}{12}$ written as a decimal?</p> <p>A -7.25 B $-7.\bar{3}$ C $-7.4\bar{16}$ D -7.512</p>																
2.	<p>Which set or sets does the number $-9\frac{1}{2}$ belong to?</p> <p>A Integers only C Integers and rational numbers only B Rational numbers only D Whole numbers, integers, and rational numbers</p>																
3.	<p>Kareem had \$25 in his bank account on Monday. The table shows his account activity for the next four days. What was the balance in Kareem's account on Friday?</p> <table border="1" style="margin: 10px auto; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="padding: 5px;">Day</th> <th style="padding: 5px;">Deposit</th> <th style="padding: 5px;">Withdrawal</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Monday</td> <td style="padding: 5px;">none</td> <td style="padding: 5px;">\$13.50</td> </tr> <tr> <td style="padding: 5px;">Tuesday</td> <td style="padding: 5px;">\$85.10</td> <td style="padding: 5px;">none</td> </tr> <tr> <td style="padding: 5px;">Wednesday</td> <td style="padding: 5px;">none</td> <td style="padding: 5px;">\$55.32</td> </tr> <tr> <td style="padding: 5px;">Thursday</td> <td style="padding: 5px;">\$17.95</td> <td style="padding: 5px;">none</td> </tr> </tbody> </table> <p>A \$59.23 B \$9.23 C $-\\$9.23$ D $-\\$59.23$</p>	Day	Deposit	Withdrawal	Monday	none	\$13.50	Tuesday	\$85.10	none	Wednesday	none	\$55.32	Thursday	\$17.95	none	
Day	Deposit	Withdrawal															
Monday	none	\$13.50															
Tuesday	\$85.10	none															
Wednesday	none	\$55.32															
Thursday	\$17.95	none															
4.	<p>A used boat is on sale for \$2,400. Austin makes an offer equal to $\frac{2}{3}$ of this price. How much does Austin offer for the boat?</p> <p>A \$3,600 B \$1,800 C \$1,600 D \$800</p>																
5.	<p>Working together, 9 friends pick $23\frac{2}{5}$ bags of apples at an orchid. They divide the bags of apples equally between them. How many bags does each friend get?</p> <p>A $32\frac{2}{5}$ bags B $14\frac{2}{5}$ bags C $2\frac{3}{5}$ bags D $2\frac{5}{9}$ bags</p>																
6.	<p>The Flathead Rail Tunnel in Montana is about $7\frac{3}{4}$ miles long. A train travels at a speed of $\frac{3}{4}$ mile per minute. How long will it take the train to go through the tunnel?</p> <p>A $\frac{7}{16}$ minute B $5\frac{3}{16}$ minutes C $8\frac{1}{3}$ minutes D $10\frac{1}{3}$ minutes</p>																
7.	<p>To which set or sets does the number -18 belong?</p> <p>A Integers only C Integers and rational numbers only B Rational numbers only D Whole numbers, integers, and rational numbers</p>																

8.	What is the value of $(-2.75)(1.16)$? [griddable]	
9.	Mrs. Rodriguez is going to use $6\frac{1}{3}$ yards of material to make two dresses. The larger dress required $3\frac{2}{3}$ yards of material. How much material will Mrs. Rodriguez have left to use on the smaller dress? A $1\frac{2}{3}$ yards B $2\frac{1}{3}$ yards C $2\frac{2}{3}$ yards D $3\frac{1}{3}$ yards	
10.	Winslow buys 1.2 pounds of bananas. The bananas cost \$1.29 per pound. To the nearest cent, how much does Winslow pay for the bananas? A \$1.08 B \$1.20 C \$1.55 D \$2.49	
11.	Roberta earns \$7.65 per hour. How many hours does Roberta need to work to earn \$24.48? [griddable]	
12.	What is the product of the following expression? $(2.2)(1.5)(-4.2)$ [griddable]	
13.	Victor is ordering pizzas for a party. He would like to have $\frac{1}{4}$ of a pizza for each guest. He can only order whole pizzas, not part of a pizza. If he expects 27 guests, how many pizzas should he order? [griddable]	
14.	A rabbit can run 35 miles per hour. A fox can run 21 miles in half an hour. Which animal is faster, and by how much? A The rabbit is faster by 7 miles per hour. B The fox is faster by 7 miles per hour. C The rabbit is faster by 14 miles per hour. D The fox is faster by 14 miles per hour.	
15.	A pet survey found that the ratio of dogs to cats is $\frac{2}{5}$. Which proportion shows the number of dogs to cats if the number of cats is 140? A $\frac{2 \text{ dogs}}{5 \text{ cats}} = \frac{140 \text{ dogs}}{350 \text{ cats}}$ C $\frac{2 \text{ dogs}}{5 \text{ cats}} = \frac{28 \text{ dogs}}{140 \text{ cats}}$ B $\frac{2 \text{ dogs}}{5 \text{ cats}} = \frac{140 \text{ cats}}{350 \text{ dogs}}$ D $\frac{2 \text{ dogs}}{5 \text{ cats}} = \frac{56 \text{ dogs}}{140 \text{ cats}}$	
16.	What is the cost of 2 kilograms of flour, if 3 kilograms cost \$4.86 and the unit price for each package of flour is the same? A \$0.081 B \$2.86 C \$3.24 D \$9.72	

17. The graph shows the relationship between the late fines the library charges and the number of days late. What is an equation for the relationship?

A $y = 0.25x$
 B $y = 0.40x$
 C $y = 0.50x$
 D $y = 0.75x$

18. The table shows your distance from home as you walk at a constant rate. Give the constant of proportionality representing miles per minute as a decimal.

Time (min)	10	20	30
Distance (mi)	0.5	1	1.5

[griddable]

Day 2 Mixed Review

1. Zalmon walks $\frac{3}{4}$ of a mile in $\frac{3}{10}$ of an hour. What is his speed in miles per hour?

A 0.225 miles per hour C 2.5 miles per hour
 B 2.3 miles per hour D 2.6 miles per hour

2. Shaylyn measured her house as 5 meters tall. Which of these is an equivalent measurement?

1 meter = 1.1 yards 1 meter = 3.3 feet
 1 meter = 39.4 inches 1 meter = 0.0006 miles

A 0.3 miles C 16.5 feet
 B 7.3 yards D 27.2 inches

3. Find the percent change from 70 to 56.

A 20% decrease C 25% decrease
 B 20% increase D 25% increase

4. Delia uses 3.5 skeins of yarn to knit one complete scarf. How many scarves can she complete if she has 19 skeins of yarn?

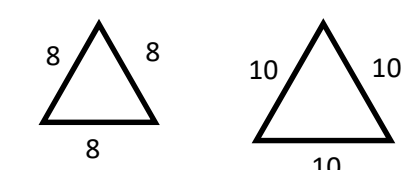
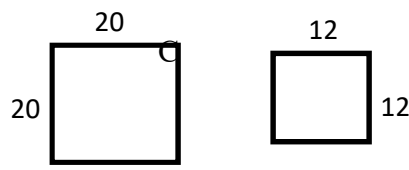
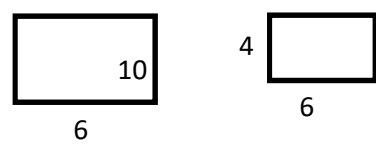
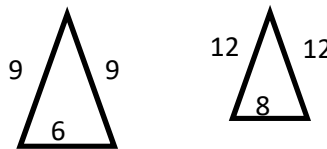
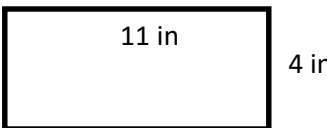
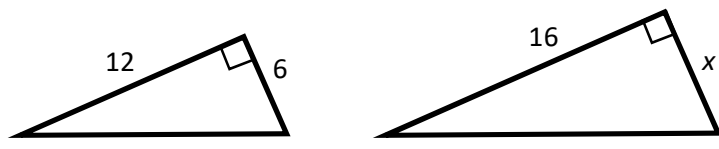
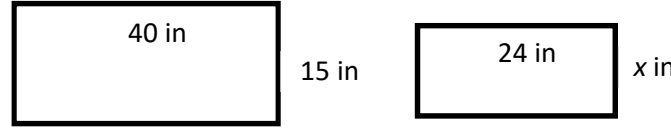
A 4 scarves B 5 scarves C 6 scarves D 7 scarves

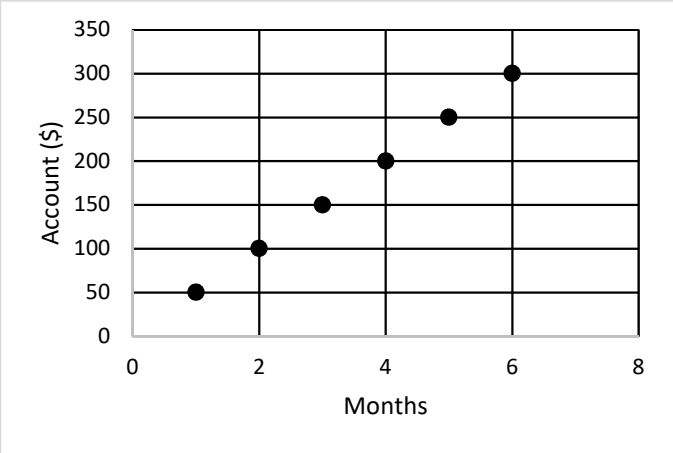
5. The rainfall total two years ago was 10.2 inches. Last year's total was 20% greater. What was last year's rainfall total?

A 8.16 inches B 11.22 inches C 12.24 inches D 20.4 inches

6. A pair of basketball shoes was originally priced at \$80, but was marked up 37.5%. What was the retail price of the shoes?

A \$50 B \$83 C \$110 D \$130

7.	<p>The day after Halloween candy was marked down 40%. Which expression represents the new retail price?</p> <p>A $0.4p$ B $0.6p$ C $1.4p$ D $1.6p$</p>	
8.	<p>The sales tax rate in Jan's town is 7.5%. If she buys 3 lamps for \$23.59 each and a sofa for \$769.99, how much sales tax does she owe?</p> <p>A \$58.85 B \$63.06 C \$67.26 D \$71.46</p>	
9.	<p>A bank offers an annual simple interest rate of 8% on home improvement loans. How much would Tobias owe if he borrowed \$17,000 over a period of 2 years?</p> <p>A \$1,360 B \$2,720 C \$18,360 D \$19,720</p>	
10.	<p>The granola Summer buys used to cost \$6.00 per pound, but it has been marked up 15%. How much in dollars and cents will Summer pay for 2.6 pounds of granola at the new price? [griddable]</p>	
11.	<p>Which shows a pair of shapes that are not similar? All corresponding angles have equal measure.</p> <p>A  C </p> <p>B  D </p>	
12.	<p>A scale drawing of a rectangular deck is shown below. The scale used is 2 in: 25 ft. What is the perimeter of the actual deck?</p> <p></p> <p>A 187.5 ft B 375 ft C 550 ft D 750 ft</p>	
13.	<p>The two triangles below are similar. Find the area of the larger triangle.</p> <p></p> <p>A 8 square units B 36 square units C 64 square units D 128 square units</p>	
14.	<p>An advertising company is creating a large wall banner and a smaller flyer that are similar figures. What percent of the area of the banner is the area of the flyer? [griddable]</p> <p></p>	

15.	<p>If the relationship between distance y in total feet and time x in seconds is proportional, which rate is represented by $y = 0.6x$?</p> <p>A 3 feet in 5 s B 3 feet in 9 s C 10 feet in 6 s D 18 feet in 3 s</p>	
16.	<p>The Baghrams make regular monthly deposits in a savings account. The graph shows the relationship between the number x of months and the amount y in dollars in the account.</p>  <p>What is the equation for the deposit?</p> <p>A $\frac{y}{x} = \\$25/\text{month}$ C $\frac{y}{x} = \\$50/\text{month}$ B $\frac{y}{x} = \\$40/\text{month}$ D $\frac{y}{x} = \\$75/\text{month}$</p>	
17.	<p>1 meter = 1.1 yards 1 meter = 3.3 feet 1 meter = 39.4 inches 1 meter = 0.0006 miles</p> <p>Rosa's room is 4 meters wide. Which of these is an equivalent measurement?</p> <p>A 0.28 miles C 12.4 feet B 4.4 yards D 136.2 inches</p>	
18.	<p>Find the percent change from 72 to 90.</p> <p>A 20% decrease C 25% decrease B 20% increase D 25% increase</p>	
19.	<p>A store had a sale on art supplies. The price p of each item was marked down 60%. Which expression represents the new price?</p> <p>A $0.4p$ B $0.6p$ C $1.4p$ D $1.6p$</p>	
20.	<p>Clarke borrows \$16,000 to buy a car. He pays simple interest at an annual rate of 6% over a period of 3.5 years. How much does he pay altogether?</p> <p>A \$18,800 B \$19,360 C \$19,920 D \$20,480</p>	

21. The smaller circle has a diameter that is half the size of the larger circle. What is the missing circumference in centimeters? [griddable]

$C = ?$ $C = 53.38 \text{ cm}$

22. Jermaine paid \$37.95 for 11 gallons of gasoline. What was the price in dollars per gallon? [griddable]

23. Shown below is a scale drawing of a rectangular patio.

21 cm 12 cm Scale 2 cm: 1ft

What is the perimeter of the actual patio? [griddable]

Day 3 Mixed Review

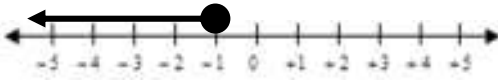
1. Which description corresponds to the relationship shown in the table?

Hours	5	10	15	20
Pay	\$50	\$90	\$130	\$170

A earning \$10 an hour C earning \$7 an hour plus a \$15 bonus
 B earning \$8 an hour plus a \$10 bonus D earning \$9 an hour

2. Which equation represents the same linear relationship as the graph below?

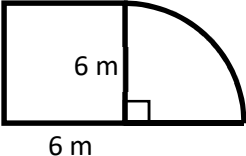
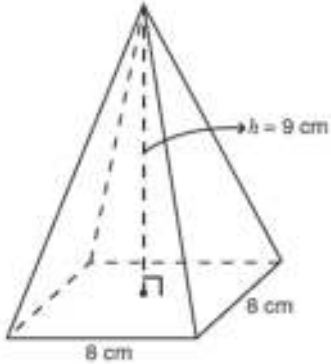
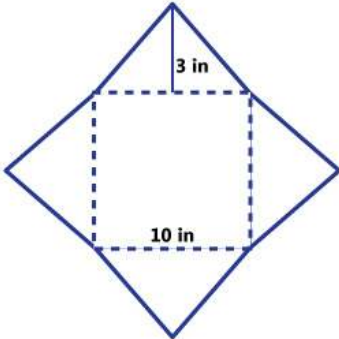
A $y = 1.2x + 32$ C $y = 0.75x + 50$
 B $y = 1.5x + 20$ D $y = 0.8x + 45$

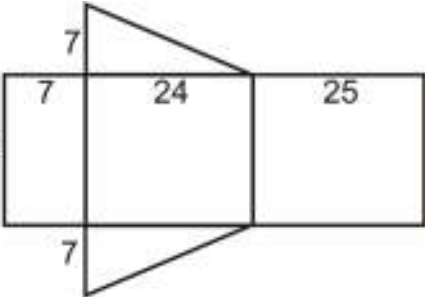
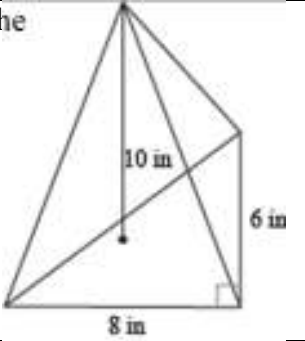
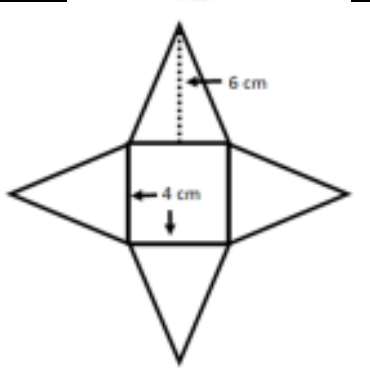
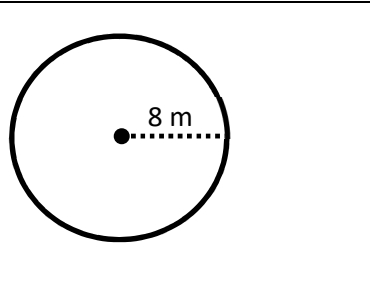
11.	Which represents the solution for the inequality $3x - 7 > 5$?																																																	
	A $x < 4$ B $x \leq 4$ C $x > 4$ D $x \geq 4$																																																	
12.	The 30 members of a choir are trying to raise at least \$1,500 to cover travel costs to a singing camp. They already raised \$600. Which inequality could you solve to find the average amount each member can raise in order to meet the goal?																																																	
	A $30x + 600 > 1500$ C $30x + 600 < 1500$ B $30x + 600 \geq 1500$ D $30x + 600 \leq 1500$																																																	
13.	Mrs. Drennan keeps a bag of small prizes to distribute to her students. She likes to keep at least three times as many prizes in the bag as she has students. The bag currently has 72 prizes in it. Mrs. Drennan has 26 students. What is the least amount of prizes Mrs. Drennan needs to buy? [griddable]																																																	
14.	Timothy began the week with \$35. He bought lunch at school, paying \$2.25 for each meal. Let x be the number of meals he bought at school and y be the amount of money he had left at the end of the week. Which equation represents the relationship in the situation?																																																	
	A $y = 2.25x + 35$ C $x = -2.25y + 35$ B $y = -2.25x + 35$ D $y = 2.25x - 35$																																																	
15.	Which table represents the same linear relationship as the equation $y = 3x + 9$?																																																	
	<table border="1" style="margin-bottom: 10px;"> <tr><td>A</td><td>x</td><td>0</td><td>1</td><td>2</td><td>3</td></tr> <tr><td></td><td>y</td><td>0</td><td>2</td><td>6</td><td>9</td></tr> </table> <table border="1" style="margin-bottom: 10px;"> <tr><td>B</td><td>x</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> <tr><td></td><td>y</td><td>15</td><td>18</td><td>21</td><td>24</td></tr> </table> <table border="1" style="margin-bottom: 10px;"> <tr><td>C</td><td>x</td><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td></td><td>y</td><td>12</td><td>21</td><td>30</td><td>39</td></tr> </table> <table border="1"> <tr><td>D</td><td>x</td><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td></td><td>y</td><td>9</td><td>18</td><td>27</td><td>36</td></tr> </table>	A	x	0	1	2	3		y	0	2	6	9	B	x	2	3	4	5		y	15	18	21	24	C	x	1	2	3	4		y	12	21	30	39	D	x	1	2	3	4		y	9	18	27	36	
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16.	The 23 members of the school jazz band are trying to raise at least \$1,800 to cover the cost of traveling to a competition. The members have already raised \$750. Which inequality could you solve to find the amount each member should raise to meet the goal?																																																	
	A $23x + 750 > 1800$ C $23x + 750 < 1800$ B $23x + 750 \geq 1800$ D $23x + 750 \leq 1800$																																																	
17.	What is the solution of the inequality $2x - 9 < 7$?																																																	
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18.	Which inequality has the solution shown?																																																	
																																																		
	A $3x + 5 < 2$ C $2x + 5 \leq 1$ B $4x + 12 < 4$ D $3x + 6 \leq 3$																																																	

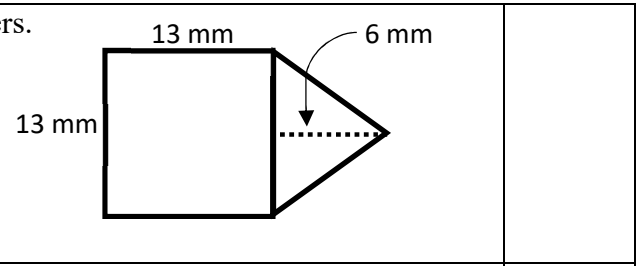
19.	What is the greatest whole number that makes the inequality $4x + 4 \leq 12$ true? [griddable below]	
20.	What is the solution to the equation $8x - 11 = -75$? [griddable]	

Day 4 Mixed Review

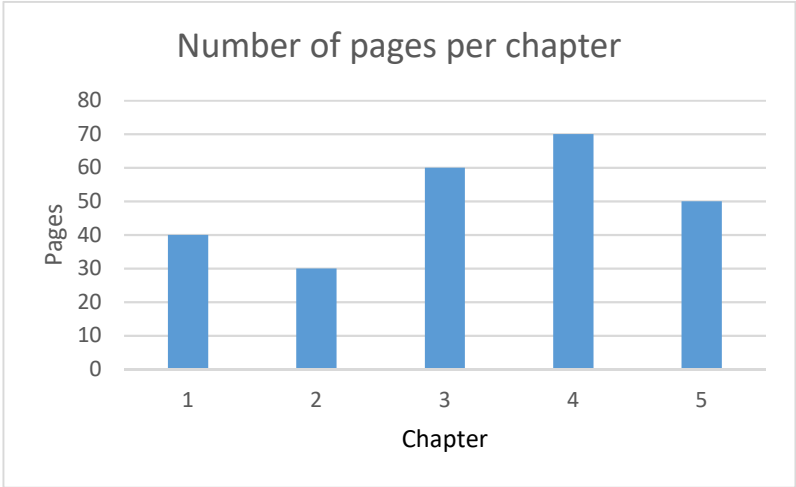
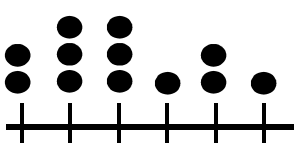
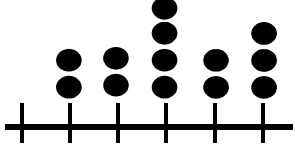
1.	<p>Use the diagram for Exercises 1-3.</p> <p>What is the measure of $\angle BFC$?</p> <p>A 18° B 72° C 108° D 144°</p>	
2.	<p>Which describes the relationship between $\angle BFA$ and $\angle CFD$?</p> <p>A adjacent angles C supplementary angles B complementary angles D vertical angles</p>	
3.	<p>Which information would allow you to identify $\angle BFA$ and $\angle AFE$ as complementary angles?</p> <p>A $m\angle AFE = 108^\circ$ C $\angle BFA$ and $\angle BFC$ as supplementary angles B $\angle DFE$ is a right angle D $\angle BFA$ and $\angle BFC$ as adjacent angles</p>	
4.	<p>David pays \$7 per day to park his car. He uses a debit card each time. By what amount does his bank account change due to parking charges over a 40-day period?</p> <p>A $-\\$280$ B $-\\$47$ C $\\$47$ D $\\$280$</p>	
5.	<p>What is the circumference of the circle?</p> <p>A 34.54 m B 69.08 m C 379.94 m D 1,519.76 m</p>	
6.	<p>What is the area of the circle?</p> <p>A 23.55 m^2 B 47.1 m^2 C 176.625 m^2 D 706.5 m^2</p>	

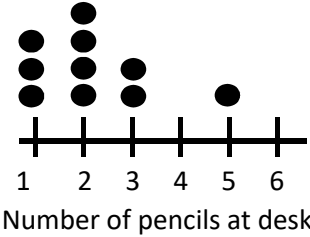

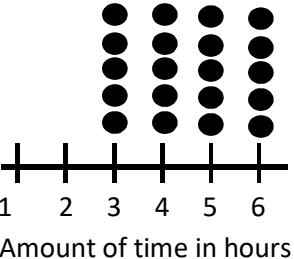
7.	<p>Find the area in square meters of the figure. [griddable]</p> 	
8.	<p>The volume of a triangular pyramid is 232 cubic units. The area of the base of the pyramid is 29 square units. What is the height of the pyramid?</p> <p>A 8 units B 12 units C 16 units D 24 units</p>	
9.	<p>What is the volume of a rectangular prism that has a length of 8.5 centimeters, a width of 3.2 centimeters, and a height of 6 centimeters?</p> <p>A 19.2 cm³ B 27.2 cm³ C 51 cm³ D 163.2 cm³</p>	
10.	<p>What is the volume of the rectangular pyramid shown?</p> <p>A 576 cm³ B 72 cm³ C 192 cm³ D 1728 cm³</p> 	
11.	<p>A circle has a circumference of 56π. What is the radius of the circle?</p> <p>A 28 cm B 56 cm C 88 cm D 112 cm</p>	
12.	<p>What is the volume of a triangular prism that has a height of 45 meters and has a base with an area of 20 square meters?</p> <p>A 225 m³ B 300 m³ C 450 m³ D 900 m³</p>	
13.	<p>What is the total surface area of the square pyramid whose net is shown?</p> <p>A 100 in² B 130 in² C 160 in² D 220 in²</p> 	

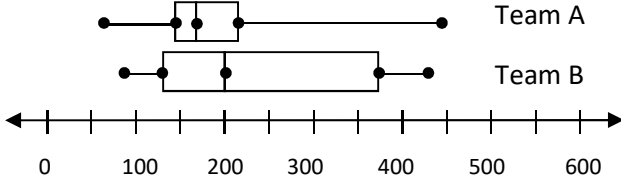
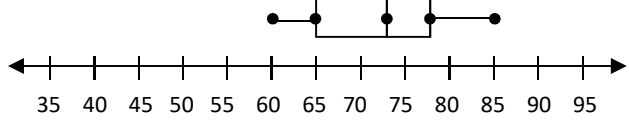
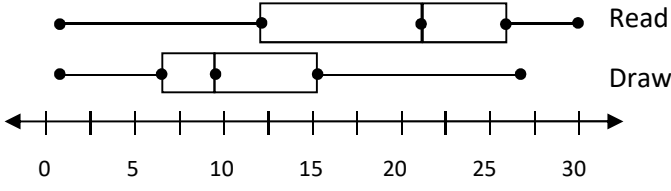
14.	<p>What is the lateral surface area in square units of the prism?</p> <p>A 1568 square units B 1736 square units C 1904 square units D Not here</p>	
15.	<p>The volume of a triangular pyramid is 437 cubic units. The height of the pyramid is 23 units. What is the area of the base of the pyramid?</p> <p>A 6.3 units² B 19 units² C 38 units² D 57 units²</p>	
16.	<p>The dimensions of the pyramid are given. What is the volume of the pyramid?</p> <p>A 480 in³ B 240 in³ C 160 in³ D 80 in³</p>	
17.	<p>What is the lateral surface area of the square pyramid whose net is shown?</p> <p>A 64 cm² B 112 cm² C 48 cm² D 96 cm²</p>	
18.	<p>A bank offers a home improvement loan with simple interest at an annual rate of 12%. JT borrows \$14,000 over a period of 3 years. How much will he have to pay back altogether?</p> <p>A \$15,680 B \$17,360 C \$19,040 D \$20,720</p>	
19.	<p>The radius of the circle is given in meters. What is the circumference of the circle?</p> <p>A 25.12 meters B 50.24 meters C 200.96 meters D 803.84 meters</p>	

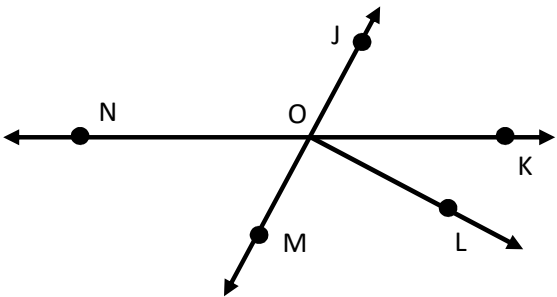
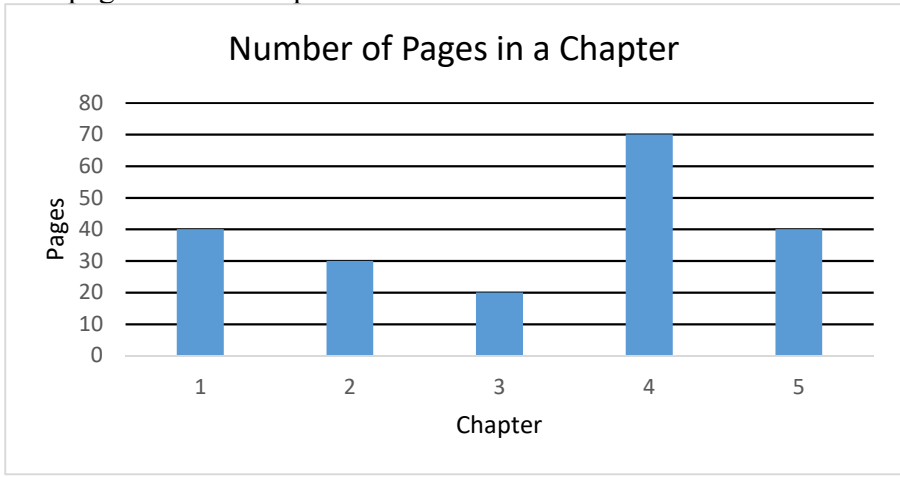
20.	<p>The dimensions of the figure are given in millimeters. What is the area of the two-dimensional figure?</p> <p>A 39 mm² B 169 mm² C 208 mm² D 247 mm²</p>	
21.	<p>What is the measure in degrees of an angle that is supplementary to a 74° angle? [griddable]</p>	
22.	<p>What is the volume in cubic centimeters of a rectangular prism that has a length of 6.2 centimeters, a width of 3.5 centimeters, and a height of 10 centimeters? [griddable]</p>	

Day 5 Mixed Review

1.	<p>Chelsea is reading a 250-page book that is divided into five chapters. For 1-2, use the bar graph below.</p> <div style="text-align: center;">  </div> <p>What percent of the book's pages are in Chapter 4?</p> <p>A 24% B 28% C 35% D 70%</p>	
2.	<p>If Chelsea has read through the first half of Chapter 3, what percent of the book has she read?</p> <p>A 25% B 40% C 44% D 52%</p>	
3.	<p>Which is a true statement base on the dot plots below?</p> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>Set A</p> </div> <div style="text-align: center;">  <p>Set B</p> </div> </div> <p>A Set A has the lesser range. C Set A has the greater mean. B Set B has the greater median. D Set B is less symmetric than Set A.</p>	

4.	<p>The dot plot below shows the number of pencils each boy has at his desk in class.</p>  <p>Find the median for the number of pencils. [griddable]</p>	
5.	<p>A middle school has 490 students. Mae surveys a random sample of 60 students and finds that 24 of them have pet dogs. How many students are likely to have pet dogs?</p> <p>A 98 B 196 C 245 D 294</p>	
6.	<p>Caitlyn finds that the experimental probability of her making a three-point shot is 30%. Out of 500 three-point shots, about how many could she predict she would make?</p> <p>A 100 B 115 C 125 D 150</p>	
7.	<p>The box plot shows the results from a survey in which 50 of the school's 7th graders were asked about their height. Which could you infer based on the box plot below?</p>  <p>A Most 7th graders are at least 65 inches tall. B Most 7th graders are at least 54 inches tall. C Almost no 7th graders are less than 60 inches tall. D Almost no 7th graders are more than 60 inches tall.</p>	
8.	<p>Which of the following is a random sample?</p> <p>A A radio DJ asks the first 10 listeners who call in if they liked the last song. B 20 customers at a chicken restaurant are surveyed on their favorite food. C Members of a polling organization survey 800 registered voters by randomly choosing names from a list of all registered voters. D Rebecca used an email poll to survey 100 students about how often they use the internet.</p>	
9.	<p>Mary wanted to know the amount of time 7th grade students spend on homework each week, so she surveyed 20 students at random. The results are shown below.</p>  <p>There are 164 students in the 7th grade. Predict how many 7th grader students spend 5 hours on homework in a week. [griddable]</p>	

10.	<p>Which is a true statement based on the box plots below?</p>  <p>A The data for Team B have the greater range. B The data for Team A are more symmetric. C The data for Team B have the greater interquartile range. D The data for Team A have the greater median.</p>	
11.	<p>Which is a random sample?</p> <p>A 10 students in the Spanish Club are asked how many languages they speak. B 20 customers at an Italian restaurant are surveyed on what their favorite food is. C 15 students were asked what their favorite color is. D 10 customers at a pet store were asked whether or not they had pets.</p>	
12.	<p>A survey asked 100 students in a school to name the temperature at which they feel most comfortable. The box plot below shows the results for temperatures in degrees Fahrenheit. Which could you infer based on the box plot below?</p>  <p>A Most students prefer a temperature less than 65 degrees. B Most students prefer a temperature of at least 70 degrees. C Almost no students prefer a temperature of less than 75 degrees. D Almost no students prefer a temperature of more than 65 degrees.</p>	
13.	<p>The box plots below show data from a survey of students under 14 years old. They were asked on how many days in a month they read and draw. Based on the box plots, which is a true statement about students?</p>  <p>A Most students draw at least 12 days a month. B Most students read less than 12 days a month. C Most students read more often than they draw. D Most students draw more often than they read.</p>	

<p>14.</p>	<p>Which describes the relationship between $\angle NOM$ and $\angle JOK$ in the diagram?</p>  <p>A adjacent angles B complementary angles C supplementary angles D vertical angles</p>	
<p>15.</p>	<p>Lee Middle School has 420 students. Irene surveys a random sample of 45 students and finds that 18 of them have pet cats. How many students are likely to have pet cats? [griddable]</p>	
<p>16.</p>	<p>Katie is reading a 200 page book that is divided into five chapters. The bar graph shows the number of pages in each chapter.</p>  <p>What percent of the pages are in Chapter 2? [griddable]</p>	
<p>17.</p>	<p>A frozen yogurt shop offers scoops in cake cones, waffle cones, or cups. You can get vanilla, chocolate, strawberry, pistachio, or coffee flavored frozen yogurt. If you order a single scoop, how many outcomes are in the sample space?</p> <p>A 3 B 5 C 8 D 15</p>	
<p>18.</p>	<p>A bag contains 7 purple beads, 4 blue beads, and 4 pink beads. What is the probability of not drawing a pink bead?</p> <p>A $\frac{4}{15}$ B $\frac{7}{15}$ C $\frac{8}{15}$ D $\frac{11}{15}$</p>	
<p>19.</p>	<p>During the month of June, Ava kept track of the number of days she saw birds in her garden. She saw birds on 18 days in the month. What is the experimental probability that she will see birds in her garden on July 17?</p> <p>A $\frac{1}{18}$ B $\frac{2}{5}$ C $\frac{1}{2}$ D $\frac{3}{5}$</p>	

20.	The experimental probability of hearing thunder on any given day in Ohio is 30%. Out of 600 days, on about how many days can Ohioans expect to hear thunder? A 90 days B 180 days C 210 days D 420 days											
21.	Izzy tossed two coins several times and then recorded the results in the table below. <table border="1" style="margin-left: auto; margin-right: auto;"><thead><tr><th>Toss 1</th><th>Toss 2</th><th>Toss 3</th><th>Toss 4</th><th>Toss 5</th></tr></thead><tbody><tr><td>H; T</td><td>T; T</td><td>T; H</td><td>H; T</td><td>H; H</td></tr></tbody></table> What is the experimental probability that both coins will land on the same side on Izzy's next toss? A $\frac{1}{5}$ B $\frac{2}{5}$ C $\frac{3}{5}$ D $\frac{4}{5}$	Toss 1	Toss 2	Toss 3	Toss 4	Toss 5	H; T	T; T	T; H	H; T	H; H	
Toss 1	Toss 2	Toss 3	Toss 4	Toss 5								
H; T	T; T	T; H	H; T	H; H								
22.	Maggie has a spinner that was evenly divided into sections of red, blue, and green. She spun the spinner and tossed a coin several times. The table below shows the results. <table border="1" style="margin-left: auto; margin-right: auto;"><thead><tr><th>Trial 1</th><th>Trial 2</th><th>Trial 3</th><th>Trial 4</th><th>Trial 5</th></tr></thead><tbody><tr><td>blue; T</td><td>green; T</td><td>green; H</td><td>red; T</td><td>blue; H</td></tr></tbody></table> Given the results, what is the experimental probability of spinning blue? Write an answer as a decimal. [griddable]	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5	blue; T	green; T	green; H	red; T	blue; H	
Trial 1	Trial 2	Trial 3	Trial 4	Trial 5								
blue; T	green; T	green; H	red; T	blue; H								

Day 6 Mixed Review

1.	What is the probability of flipping two fair coins and having both show tails? A $\frac{1}{8}$ B $\frac{1}{4}$ C $\frac{1}{3}$ D $\frac{1}{2}$	
2.	A bag contains 8 white marbles and 2 black marbles. You pick out a marble, record its color, and put the marble back in the bag. If you repeat this process 45 times, how many times would you expect to remove a white marble from the bag? A 9 B 32 C 36 D 40	
3.	Philip rolls a standard number cube 24 times. What is the best prediction for the number of times he will roll a number that is even and less than 4? A 2 B 3 C 4 D 6	
4.	A set of cards includes 24 yellow cards, 18 green cards, and 18 blue cards. What is the probability that a card chosen at random is not green? A $\frac{3}{10}$ B $\frac{4}{10}$ C $\frac{3}{5}$ D $\frac{7}{10}$	
5.	A rectangle made of square tiles measures 10 tiles long and 8 tiles wide. What is the width of a similar rectangle whose length is 15 tiles? A 3 tiles B 12 tiles C 13 tiles D 18.75 tiles	
6.	You buy a game that originally cost \$35. It was on sale at 20% off. You paid 6% tax on the sale price. What was the total amount you paid? A \$29.68 B \$37.10 C \$44.10 D \$44.52	

7.	The Fernandez family drove 273 miles in 5.25 hours. How far would they have driven at that rate in 4 hours? A 208 miles B 220 miles C 280 miles D 358 miles											
8.	There are 20 tennis balls in a bag. Five are orange, 7 are white, 2 are yellow, and 6 are green. You choose one at random. Which color ball are you least likely to choose? A green B orange C white D yellow											
9.	Gabby's frozen yogurt cones come in 3 flavors: chocolate, vanilla, and strawberry. There are 4 choices of toppings: sprinkles, strawberries, nuts, and granola. You choose a cone at random. What is the probability, expressed as a decimal, that you get a cone with strawberry topping? [griddable]											
10.	During the month of April, Dora kept track of the bugs she saw in her garden. She saw a lady bug on 23 days of the month. What is the experimental probability that she will see a ladybug on May 1? A $\frac{1}{23}$ B $\frac{7}{30}$ C $\frac{1}{2}$ D $\frac{23}{30}$											
11.	Ryan flips a coin 8 times and gets tails all 8 times. What is the experimental probability that Ryan will get heads the next time he flips the coin? A 1 B $\frac{1}{2}$ C $\frac{1}{8}$ D 0											
12.	Jay tossed two coins several times and then recorded the results in the table below. <table border="1" style="margin: 10px auto;"> <thead> <tr> <th>Toss 1</th> <th>Toss 2</th> <th>Toss 3</th> <th>Toss 4</th> <th>Toss 5</th> </tr> </thead> <tbody> <tr> <td>H; H</td> <td>H; T</td> <td>T; H</td> <td>T; T</td> <td>T; H</td> </tr> </tbody> </table> <p>What is the experimental probability that the coins will land on different sides on his next toss? A $\frac{1}{5}$ B $\frac{2}{5}$ C $\frac{3}{5}$ D $\frac{4}{5}$</p>	Toss 1	Toss 2	Toss 3	Toss 4	Toss 5	H; H	H; T	T; H	T; T	T; H	
Toss 1	Toss 2	Toss 3	Toss 4	Toss 5								
H; H	H; T	T; H	T; T	T; H								
13.	What is the probability of tossing two fair coins and having exactly one land tails side up? A $\frac{1}{8}$ B $\frac{1}{4}$ C $\frac{1}{3}$ D $\frac{1}{2}$											
14.	Find the percent change from 60 to 96. A 37.5% decrease C 60% decrease B 37.5% increase D 60% increase											
15.	Jason, Eric, and Jamie are friends in art class. The teacher randomly chooses 2 of the 21 students in the class to work together on a project. What is the probability that two of these three friends will be chosen? A $\frac{1}{105}$ B $\frac{1}{70}$ C $\frac{34}{140}$ D $\frac{4}{50}$											

Carey computed her taxable income as \$27,342 and paid \$4,127 in federal withholding. Use the tax table to find the amount in dollars Carey will get as a refund. [griddable]

8.

If line 43 (taxable income -		And you are single
At least	But less than	Your tax is -
27,200	27,250	3,659
27,250	27,300	3,666
27,300	27,350	3,674
27,350	27,400	3,681

9.

Which of the following is an example of income?

- A insurance
- B emergency savings
- C wages
- D taxes

10.

Which of the following is an example of a variable expense?

- A weekly martial arts lesson
- B rent
- C entertainment
- D monthly bus pass

11.

Barry owns a home with a value of \$170,000. He owes \$4,400 on his car, which is valued at \$11,500. He had \$9,500 in student loans to repay. He owns \$3,300 worth of musical equipment. He has a credit card balance of \$2,117. He also has \$2,900 in a bank account. What is Barry's net worth?

- A \$157,483
- B \$165,483
- C \$171,683
- D \$175,917

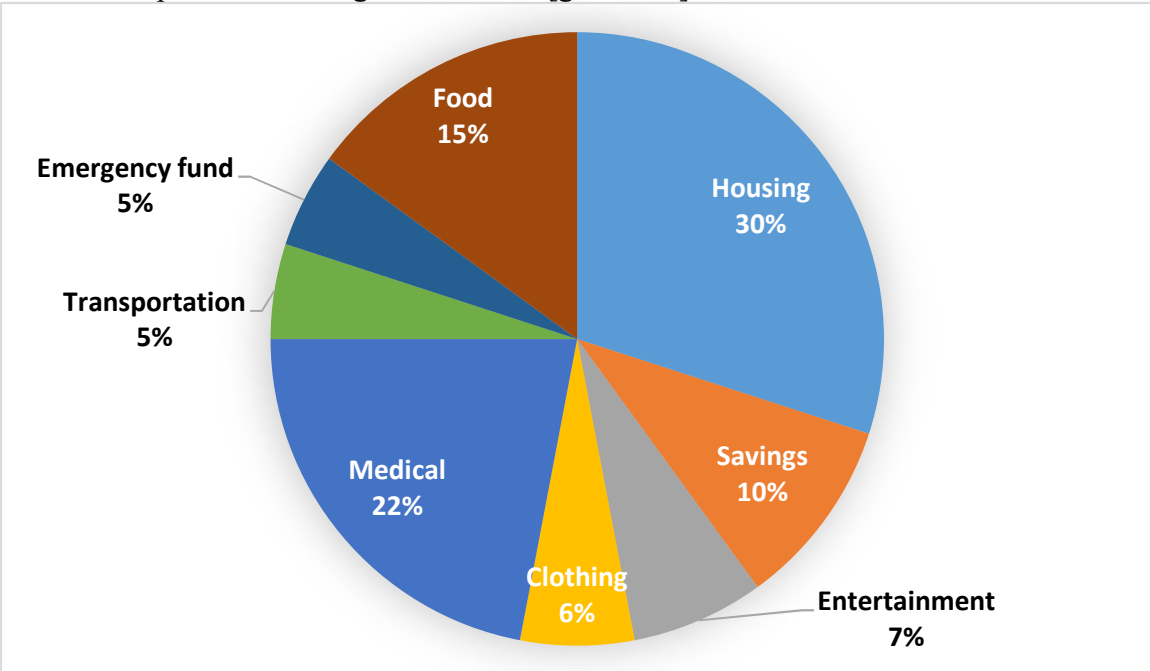
12.

Which of the following is an example of an asset?

- A car loan
- B savings bond
- C credit card bill
- D rent

13.

The Garza family consists of two adults and two children. Their current monthly income is \$4,800. The circle graph shows their monthly budget. How much money in dollars do the Garzas spend on housing each month? [griddable]



	Evan makes \$2,800 a month and has \$750 withheld as federal income tax. Use this information for the next 3 questions.	
14.	How much does Evan pay in Social Security, which is 6.2% of his monthly salary? A \$127.10 B \$173.60 C \$2,626.40 D \$2,672.90	
15.	How much does Evan pay for Medicare, which is 1.45% of his monthly salary? A \$29.73 B \$40.60 C \$2,759.40 D \$2,770.27	
16.	What is Evan's net monthly salary? A \$1835.80 B \$1876.40 C \$2,050 D \$2,585.80	
17.	Which of the following is not an example of a fixed expense? A weekly martial arts lesson C vacation B monthly bus pass D rent	
18.	Bonnie deposits \$180 in a savings account that earns simple interest at an annual rate of 3%. How much interest does her account earn after 10 years? A \$0.54 B \$5.40 C \$54 D \$540	
19.	Shelby can purchase a 4-pound item from several different retailers. Which is the best buy? A online for \$19, plus shipping and handling costs \$0.89 per pound B online for \$20, plus shipping and handling costs \$0.59 per pound C \$29.95 with a \$5-off coupon D regularly prices for \$30 on sale for 25% off	
20.	Which of the following is not an example of an expense? A savings C wages B entertainment D snacks	
21.	Mr. Burr and his daughter live in Corpus Christi, Texas. Mr. Burr's employer pays 100% of his insurance premium and 50% of the premiums for the rest of the family. His total monthly expenses according to an online family budget estimator are about \$2,100. His payroll and income taxes are \$257 and he gets tax credits of \$245. What is his necessary monthly income? A \$2,088 B \$2,112 C \$2,817 D \$3,827	
22.	Anthony owns a home with a value of \$140,000. He also owns a motorcycle worth \$7,000. He has \$22,500 in student loans to repay. He owes 9 monthly payments of \$55 each for his keyboard. He has a credit card balance of \$785. He also has \$3,400 in a bank account. What is Anthony's net worth? A \$112,620 B \$119,820 C \$126,620 D \$128,190	
23.	What is the volume of a triangular prism that has a height of 36 meters and a base with an area of 15 square meters? A 180 m^3 B 270 m^3 C 360 m^3 D 540 m^3	

