Fall Semester 6th Grade Math Exam Review

Name: _____ Homeroom: _____ Math Teacher: _____

1. Fred and his family went to the zoo. Fred started the day with $100. He bought 2 adult tickets for $15 each and 3 kid tickets for $8 each. He then spent half of his remaining money at the zoo gift shop. The expression below can be used to determine how much money Fred had at the end of the day.

$$(100 - 2 \times 15 - 3 \times 8) \div 2$$

How much money did Fred have at the end of the day?

   A. $46   C. $47

   B. $23   D. $92

2. A sixth grade class of 295 students is having an end of the year laser tag party. The party will cost $8.95 per student, but since so many students are attending the laser tag company is giving the group a $400 discount. Estimate the total cost of the party.

   A. $3,100   C. $2,700

   B. $2,000   D. $2,300

3. Yoda spends 48 weeks a year training Luke. If he trains Luke 21 hours a week, about how much time would be spent training Luke in two years?

   A. 2,000 hours   C. 500 hours

   B. 1,000 hours   D. 200 hours

4. In the expression below which operation would be performed first?

$$60 \div 3 \bullet 10 + 2$$

   A. Adding because it should be performed before dividing and multiplying.

   B. Multiplying because it should always be performed before dividing and adding.

   C. Dividing because multiplying and dividing are solved left to right in an expression.

   D. Adding because the operation on the right should always be completed first.

5. Laura is listing her age and her mom's age over the past four years. The table below shows *l*, Laura's age and *m*, her mom's age.

Laura's age, *l*	Her mom's age, *m*
7	35
8	36
9	37
10	38

If Laura continues the pattern, which of the following expressions can she use to find *m*, her mom's age when Laura is *l* years old?

A. $\dfrac{l}{5}$

C. $5 \bullet l$

B. $l + 7$

D. $l + 28$

6. Fifty sixth graders decided to raise money to help local charities. Each student brought in $5. The group then gave $35 to one charity and $45 to another charity. The expression below represents the amount of money the sixth graders had remaining.

$$50 \times 5 - (35 + 45)$$

How many money did the students have remaining?

A. $260

C. $180

B. $215

D. $170

7. A local water tank holds 50,000 gallons of water. If the tank starts out completely full and the local community uses 250 gallons of water each minute, which equation below can be used to find *w*, the amount of water remaining after *m* minutes?

A. $w = 250m + 50,000$

C. $w = 50,000 - 250m$

B. $w = 250m - 50,000$

D. $w = 50,000 + 250m$

8. The table below shows how far a car that is going 30 miles per hour would travel in a given number of minutes.

Minutes, m	Distance, d (miles)
90	45
60	30
30	15
20	10

Which expression best represents the distance d the car would travel in m minutes?

A. $\dfrac{m}{2}$

C. $2m$

B. $30m$

D. $\dfrac{m}{30}$

9. You and your best friend got out to eat. You buy 2 hamburgers at $3.95 each, 2 french fries at $1.65 each and a large chocolate milkshake to share for $2.60. If you hand the server a $20 bill, how much change will you receive?

A. $6.20

C. $8.80

B. $7.90

D. $13.80

10. Which expression is the prime factorization of 216?

A. $2^2 \times 3^4$

C. $2^3 \times 3^3$

B. $2^2 \times 3^2$

D. $2^4 \times 3^2$

11. Which expression shows the prime factorization of 320?

A. 32×10

C. $2^6 \times 3$

B. $2^5 \times 5$

D. $2^6 \times 5$

12. Ten out of twenty-five students say their math teacher does not give enough homework. The fraction of students saying their language arts teacher does not give enough homework is greater than math. Which fraction below could represent the fraction of students saying their language arts teacher does not give enough homework?

A. $\dfrac{1}{3}$

C. $\dfrac{3}{8}$

B. $\dfrac{4}{7}$

D. $\dfrac{4}{18}$

13. The numbers in each set shown below have a common characteristic.

Set A		Set B	
18	24	12	28
60	84	32	46

Which statement best describes a common characteristic of Set A or Set B?

A. Each number in Set B is a multiple of 4.

B. Each number in Set A is a multiple of 9.

C. Each number in Set A is a multiple of 6.
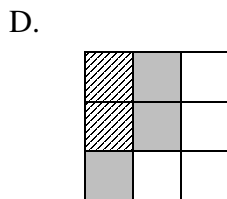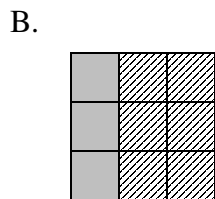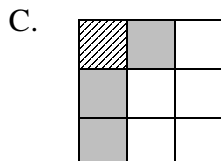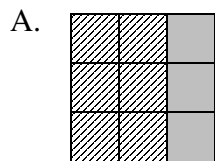
D. Each number in Set B is a multiple of 320.

14. Which of the following is not a common factor of 36 and 48?

A. 9

C. 6

B. 12

D. 4

15. Sarah eats squash every 4 days and she eats lima beans every 10 days. If she just ate squash and lima beans yesterday, how many times will she eat them together over the next 50 days?

A. 12

C. 2

B. 5

D. 1

16. Katniss ate $\frac{2}{9}$ of an apple and Tris ate $\frac{1}{3}$ of an apple. Which model below best represents the expression $\frac{2}{9}+\frac{1}{3}$?

A.

C.

B.

D.

17. The price of napkins and the number of napkins is listed in the table below.

Number of Napkins (n)	Price of Napkins (p), in cents
200	140
300	210
400	280
500	350
600	420

Let p represent the price of the napkins and n the number of napkins. Which equation shows the relationship between the price of napkins and number of napkins?

A. $p = 7 \bullet n$

C. $p = 0.7 \bullet n$

B. $n = p + 70$

D. $p = n + 100$

18. Cookie Monster had $25 to buy cookies. He spent $5.75 on chocolate chip cookies and $6.30 on peanut butter cookies. If Elmo steals $5.15 from Cookie Monster how much money does Cookie Monster have left?

    A. $12.05   C. $12.95

    B. $17.20   D. $7.80

19. Hermione is measuring the lengths of a variety of wizard wands. Which listing below shows wands that are less than 8.4 inches listed in order from greatest to least?

    A. 8.62, 8.48, 8.26, 8.15

    B. 8.38, 8.12, 7.99, 7.65

    C. 7.13, 7.46, 7.78, 8.13

    D. 8.17, 8.09, 8.9, 7.82

20. Carlee bought 2 books each month for one entire year. The least expensive was $9.75 and the most expensive was $11.25. Based on this information, which of the following is true?

    A. Carlee spent more than $25 every month during the year on books.

    B. Carlee spent less than $200 to buy all her books during the year.

    C. Carlee paid less than $12.00 every month during the year on books.

    D. Carlee spent more than $230 to buy all her books during the year.

21. Evaluate $80-(12+12)+15 \bullet 2$.

    A. 26   C. 142

    B. 86   D. 110

22. The table shows the relationship between the height of a tree in yards and the height of the tree in feet.

Tree Heights

Height (yd)	1	3	5	7	y
Height (ft)	3	9	15	21	?

Which expression can be used to find the height of a tree in feet that has a height of y yards?

A. $3y$

C. $y+2$

B. $\dfrac{y}{3}$

D. $y+6$

23. The table shows the number of students in the EIS school band.

EIS School Band

Students	Number
Girls	56
Boys	84

The director plans to arrange the students into equal rows. Only girls or boys will be in each row. What is the greatest number of students that can be in each row?

A. 2

C. 14

B. 7

D. 28

24. Nemo is asking some of his fish friends to line up according to length. Which list shows the length, in inches, of the fish from greatest to least?

A. $4\dfrac{1}{2}, 4\dfrac{5}{8}, 4\dfrac{3}{4}, 4\dfrac{1}{5}$

C. $4\dfrac{3}{4}, 4\dfrac{5}{8}, 4\dfrac{1}{2}, 4\dfrac{1}{5}$

B. $4\dfrac{1}{2}, 4\dfrac{1}{5}, 4\dfrac{5}{8}, 4\dfrac{3}{4}$

D. $4\dfrac{1}{5}, 4\dfrac{1}{2}, 4\dfrac{5}{8}, 4\dfrac{3}{4}$

25. Rachel has 20 gallons of water to use over 3 days on Survivor Island. She uses $4\frac{1}{3}$ gallons on Day 1 and $8\frac{5}{6}$ gallons on Day 2. If she needs to use 7 gallons on Day 3, does she have enough left?
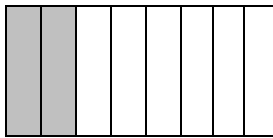
    A. No, because $8\frac{5}{6}+4\frac{1}{3}>7$.

    B. No, because $20-\left(4\frac{1}{3}+8\frac{5}{6}\right)<7$
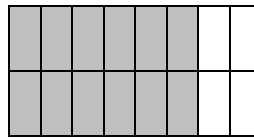
    B. Yes, because $20-8\frac{5}{6}>7-4\frac{1}{3}$

    D. Yes, because $20-4\frac{1}{3}>7$

26. Donkey was making waffles for breakfast. He gave Shrek $\frac{7}{8}$ of a waffle. Shrek ate $\frac{5}{16}$ of a waffle before Puss in Boots stole the rest. Which model can be used to represent the fraction of a waffle Puss in Boots stole?
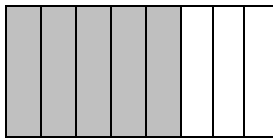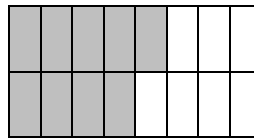
    A.

    C.

    B.

    D.

27. Woody was counting the number of items in the bedroom. He counted 12 dolls and 18 games. The next day 8 more dolls arrived. What is the new ratio of dolls to games?

    A. $12:18$ C. $18:20$

    B. $10:9$ D. $6:13$

28. On a recent trip to Australia there were 2 leaders for every 24 students. There were 5 leaders on the trip. Which proportion can be used to find the number of students on the trip?

A. $\dfrac{2}{24} = \dfrac{5}{x}$ 　　　　　　 C. $\dfrac{2}{5} = \dfrac{x}{24}$

B. $\dfrac{2}{24} = \dfrac{x}{5}$ 　　　　　　 D. $\dfrac{2}{x} = \dfrac{5}{24}$

29. Sally had $5\dfrac{1}{3}$ pounds of candy. Suzie had $2\dfrac{1}{6}$ pounds less than Sally. Sarah had $3\dfrac{1}{2}$ pounds more than Suzie. How many pounds of candy did Sarah have?

A. $3\dfrac{1}{6}$ pounds 　　　　　　 C. $7\dfrac{1}{2}$ pounds

B. $5\dfrac{2}{3}$ pounds 　　　　　　 D. $6\dfrac{2}{3}$ pounds

30. The following table shows how much homework a student has in sixth grade.

Homework for a Sixth Grader	
Language Arts	18 minutes per night
Math	120 minutes per five nights
Science	24 minutes per two nights

Which of the following rates is equivalent to the information provided in the table?

A. 100 minutes of language arts homework per five nights.

B. 20 minutes of math homework per night.

C. 36 minutes of science homework per three nights.

D. A total of 42 minutes of homework per night.

31. Movie theater companies estimate that for every 8 people in attendance they will sell a total of 96 ounces of soda. If the theater sold 156 ounces of soda to one group of teenagers, how many teenagers were in the group?

    A. 5 teenagers   C. 13 teenagers

    B. 12 teenagers   D. 20 teenagers

32. Scooby is practicing his multiplication facts. Before eating a Scooby Snack he answers 256 math problems. If Scooby can solve 30 math problems per minute, which of the following statements is a reasonable conclusion?

    A. He will have solved more than half of the problems after 4 minutes.

    B. He will have solved more than 70 problems after 2 minutes.

    C. He will have solved all the problems in less than 9 minutes.

    D. He will have solved less than 200 problems after 7 minutes.

33. In a recent survey, 7 out of 12 students say that their current math teacher is their favorite teacher of all-time. Based on this information, if 480 students are surveyed how many would choose their current math teacher as their all-time favorite teacher?

    A. 280 students   C. 396 students

    B. 40 students   D. 200 students

34. At lunch last Thursday 3 out of every 8 students chose a grilled cheese sandwich. There were 600 students at school on Thursday. How many of the students did not choose a grilled cheese sandwich?

    A. 225 because $\dfrac{3}{8} = \dfrac{225}{600}$

    B. 1600 because $\dfrac{8}{3} = \dfrac{1600}{600}$

    C. 525 because $600 - (600 \div 8) = 525$

    D. 375 because $\dfrac{3}{8} = \dfrac{225}{600}$ and $600 - 225 = 375$

35. A recipe to make 8 servings of cake calls for many ingredients, including:
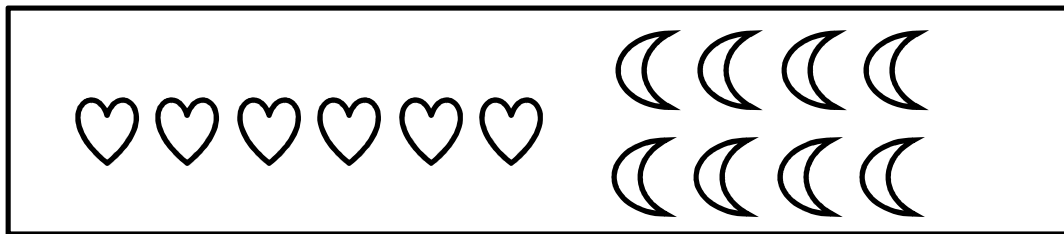- 4 cups flour
- 2 teaspoons vanilla
- 1 cup water

Based on this information, which statement is true?

A. For 4 servings you would need 8 cups of flour

B. For 32 servings you would need 8 teaspoons of vanilla

C. For 40 servings you would need 8 cups of water

D. For 16 servings you would need a total of 9 cups of flour and water

36. At a recent Black Friday sale video games were on sale at 5 for $70. In one hour the store sold 130 video games. Which equation can be used to determine x, the dollar amount of video games sold in the hour?

A. $x = 130 - (70 + 5)$

C. $\dfrac{5}{70} = \dfrac{130}{x}$

B. $\dfrac{5}{70} = \dfrac{x}{130}$
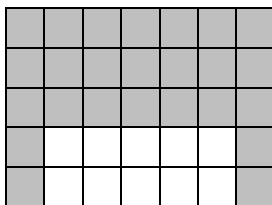
D. $x = (130 \bullet 5) - 70$

37.

In the picture above, what is the ratio of moons to hearts?

A. $6:8$

C. $4:3$

B. $8:14$

D. $3:7$

38. What is the ratio of shaded small squares to the total small squares?

    A. 5:2   C. 2:7

    B. 5:7   D. 2:5

39. A basketball team made 35 free throws in 10 games. At this rate, how many games would it take them to make 49 free throws?

Bubble in the correct answer on your scantron.

40. Phil planted a money tree in his backyard. Originally the tree was 10.7 feet tall. It grew 1.2 feet each year for the first four years. How tall was the money tree at the end of the fourth year?

Bubble in the correct answer on your scantron.

6th Grade Math
Semester I Exam Review Breakdown

Number	Answer	Unit	TEKS	Number	Answer	Unit	TEKS
1	B	1	6.2.E	21	B	1	6.2.E
2	D	1	6.2.D	22	A	2	6.5.A
3	A	1	6.2.D	23	D	3	6.1.E
4	C	1	6.2.E	24	C	4	6.1.A
5	D	2	6.5.A	25	B	4	6.2.B
6	D	1	6.2.E	26	D	4	6.2.A
7	C	2	6.5.A	27	B	5	6.3.A
8	A	2	6.5.A	28	A	5	6.3.C
9	A	1	6.2.E	29	D	4	6.2.B
10	C	3	6.1.D	30	C	5	6.2.C
11	D	3	6.1.D	31	C	5	6.2.C
12	B	4	6.1.B	32	C	5	6.2.C
13	C	3	6.1.E	33	A	5	6.2.C
14	A	4	6.1.F	34	D	5	6.3.C
15	C	4	6.1.F	35	B	5	6.3.C
16	D	4	6.2.A	36	C	5	6.3.A
17	C	2	6.5.A	37	C	5	6.3.B
18	D	1	6.2.B	38	B	5	6.3.B
19	B	1	6.1.A	39	14	5	6.3.C
20	D	1	6.2.B	40	15.5	1	6.2.B

23 out of 40 questions are readiness standards. [6.1.B, 6.2.B, 6.2.C, 6.2.E, 6.3.C, 6.5.A]
- 4-5 questions per readiness standard

17 out of 40 questions are supporting standards.
- 1-2 questions per supporting standard

Process standards are included in most questions.