End-of-Year Assessment

Grade 6 Mathematics

Congratulations! You worked hard to learn many new things this school year. Taking this Grade 6 Math test is a great way to show your family and school what you learned. It is okay if you do not know all the answers. Just try your best. You are amazing! You are taking this test so adults can learn more about how to help you.

You can ask an adult for help if you do not understand the directions. Make sure you have the reference material with the rulers. It might help you with this test. You can also use scratch paper and graph paper for this test.

If you do not know the answer to a question, choose the answer you think might be correct. You must answer the questions on your own.

You are now ready to start. Take your time and remember that trying your best is what is important. You're awesome, and you'll do great!

Texas Education Agency

EOY Grade 6 Math

Student _____

Class _____

Date _____

1. Which list shows the temperatures in order from coldest to warmest in degrees Fahrenheit?

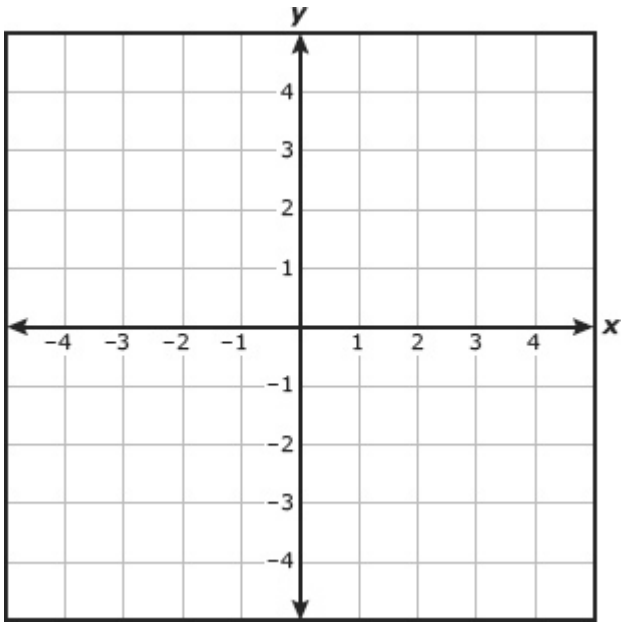
A. −10°F 8°F −5°F 0°F

B. −5°F −10°F 0°F 8°F

C. −10°F −5°F 0°F 8°F

D. 0°F −5°F 8°F −10°F

2. A coordinate grid is shown below.



Which ordered pair describes a point that is located 4 units to the left of the origin and 2 units below the *x*-axis?

A. (4, 2)

B. (−4, −2)

C. (−4, 2)

D. (4, −2)

3. George wrote an integer. The opposite of George's integer is −53.

Which of these statements about George's integer must be true?

I. The integer is 53.

II. The integer has an absolute value of −53.

III. The integer is −53.

IV. The integer has an absolute value of 53.

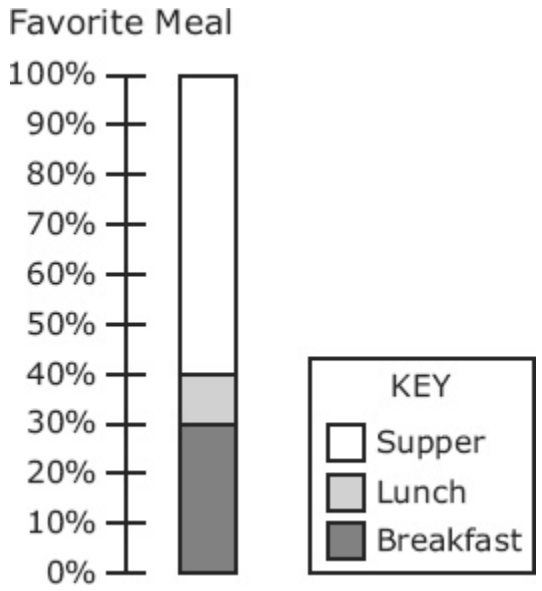
A. I and II

B. II and IV

C. II and III

D. I and IV

4. The students in a class were each asked to name their favorite meal of the day. The results are shown in this percentage bar graph.



Which table could be represented by the percentage bar graph?

A.

Student Results

Meal	Number of Students
Breakfast	3
Lunch	4
Supper	10

B.

Student Results

Meal	Number of Students
Breakfast	4
Lunch	4
Supper	12

C.

Student Results

Meal	Number of Students
Breakfast	9
Lunch	3
Supper	18

D.

Student Results

Meal	Number of Students
Breakfast	0
Lunch	3
Supper	4

5. A housepainter mixed 5 gal of blue paint with every 9 gal of yellow paint in order to make a green paint. Which ratio of gallons of blue paint to gallons of yellow paint will make the same shade of green paint?

A. 30 : 54

B. 6 : 10

C. 10 : 45

D. 27 : 15

6. Which inequality is true if $p = 3.4$?

A. $3p < 10.2$

B. $13.6 \leq 3.9p$

C. $5p > 17.1$

D. $8.5 \geq 2.5p$

7. Carlos walked to school on 14 of the 20 school days in February. Which value is equivalent to the fraction of the school days in February that Carlos walked to school?

A. 70%

B. 0.07

C. 0.142

D. 56%

8. Mr. Smith has a maximum of $50 to spend at a museum. A ticket to the museum costs $7. He can spend p dollars to buy other things at the museum. Which inequality can be used to find the possible values for p?

A. $p - 7 > 50$

B. $p - 7 < 50$

C. $p + 7 \geq 50$

D. $p + 7 \leq 50$

9. A can contains 24 fluid ounces of fruit juice. How many pints of fruit juice does the can contain?

A. 12 pt

B. 3 pt

C. $1\frac{1}{2}$ pt

D. $\frac{1}{3}$ pt

10. Which situation can be represented by the equation $y = 12x$?

A. Victoria went to school for *x* years.

This is 12 times *y*, the number of years her brother went to school.

B. Victoria spent *x* dollars to buy a gift for her brother.

She gave the cashier *y* dollars and received $12 in change.

C. Victoria has *y* dollars.

This amount is 12 times *x*, the amount of money in dollars Victoria's brother has.

D. Victoria is *y* years old.

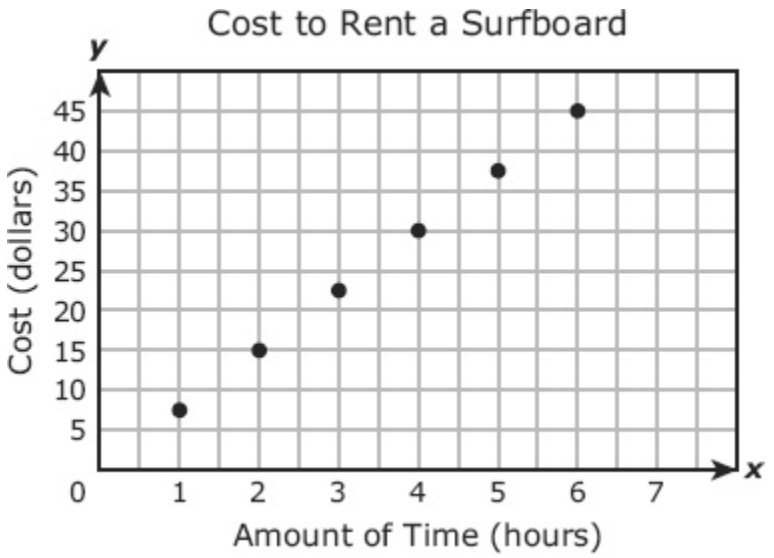
Her age is 12 years greater than *x*, her brother's age in years.

11. What is the value of the expression shown?

$$24 - 5^2$$

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

12. The graph shows the cost to rent a surfboard for different amounts of time.



Which list best represents the independent values of the graphed points?

A. 1, 7.50, 2, 15, 3, 22.50, 4, 30, 5, 37.50, 6, 45

B. 5, 10, 15, 20, 25, 30, 35, 40, 45

C. 7.50, 15, 22.50, 30, 37.50, 45

D. 1, 2, 3, 4, 5, 6

13. The table shows the approximate median annual salaries associated with two levels of education.

Median Annual Salaries

Level of Education	Bachelor's degree	Master's degree
Median Annual Salary (dollars)	57,600	69,100

Based on the data in the table, how much more money would a person with a master's degree earn than a person with a bachelor's degree over a 35-year career?

A. $402,500

B. $126,770

C. $11,500

D. $4,434,500

14. Which statement describes the relationship between x and y in these two equations?

$$y = 2x$$
$$y = x + 2$$

A. In $y = 2x$ the value of y is 2 more than the value of x, and in $y = x + 2$ the value of y is twice the value of x.

B. In $y = 2x$ and in $y = x + 2$, the value of y is 2 more than the value of x.

C. In $y = 2x$ and in $y = x + 2$, the value of y is twice the value of x.

D. In $y = 2x$ the value of y is twice the value of x, and in $y = x + 2$ the value of y is 2 more than the value of x.

15. A farmer watered $\frac{3}{8}$ of a field. What percentage is equivalent to the fraction of the field the farmer watered?

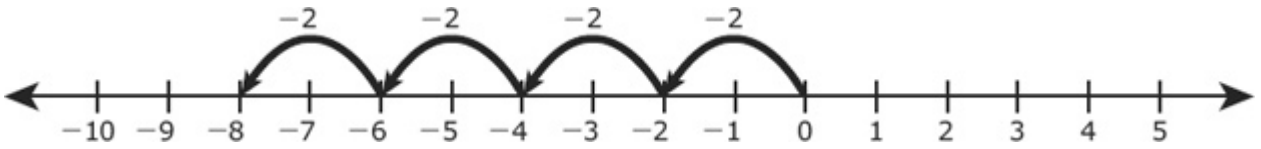
A. 24.00%

B. 37.50%

C. 8.30%

D. 3.75%

16. Which expression is represented on the number line?



A. $0 - (-8)$

B. $-2 \cdot 4$

C. $-2 + (-8)$

D. $-2 \div 4$

17. Which expression is equivalent to $y \bullet 48$?

A. $(y \bullet 40) + 8$

B. $(y \bullet 4) \bullet 8$

C. $(y \bullet 40) + (y \bullet 8)$

D. $(y \bullet 4) + 8$

18. Which expression has a value of −22?

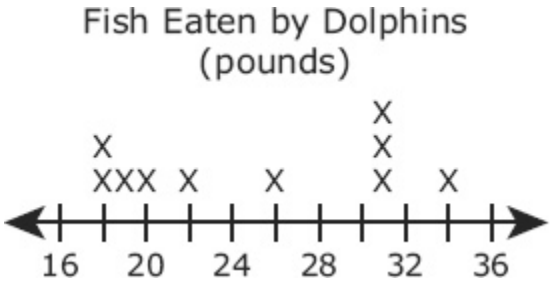
A. $8 - (-3) + 33 \div (-3)$

B. $-3 + (-2) - (-8) - 1$

C. $-6 \cdot 2 - (-15)$

D. $-5 \cdot 2 - 12$

19. The line plot shows the number of pounds of fish eaten by each dolphin at a zoo.



Which stem and leaf plot best represents the data in the line plot?

A.

Fish Eaten by Dolphins
(pounds)

Stem	Leaf
1	8 8
2	0 0 2 6
3	1 1 1 3

KEY
2|0 = 20 pounds

B.

Fish Eaten by Dolphins
(pounds)

Stem	Leaf
1	7 7 8
2	0 1 5
3	0 0 0 3

KEY
2|0 = 20 pounds

C.

Fish Eaten by Dolphins
(pounds)

Stem	Leaf
1	8 8 9
2	0 2 6
3	1 1 1 4

KEY
2|0 = 20 pounds

D.

Fish Eaten by Dolphins
(pounds)

Stem	Leaf
1	8 9
2	0 2 6
3	1 4

KEY
2|0 = 20 pounds

20. What is the prime factorization of 110?

A. $5^2 \cdot 11$

B. $2^5 \cdot 11$

C. 5 • 22

D. 2 • 5 • 11

21. In Austin, Texas, 8 bats ate 40 grams of insects in one night. At this rate, how many grams of insects could 64 bats eat in one night?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

22. The list shows the numbers of employees in the nine departments at a company.

14, 23, 6, 54, 30, 26, 17, 3, 26

What is the range of the numbers of employees in these departments?

A. 23

B. 51

C. 26

D. 18

23. A shop owner offered a 20% discount off the regular price of a mirror. The amount of the discount is $3.

What is the regular price of the mirror?

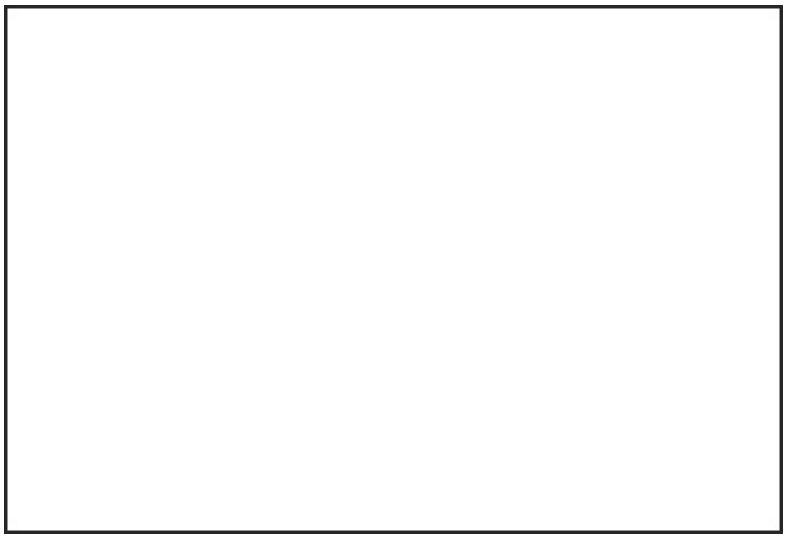
A. $15

B. $6

C. $9

D. $18

24. The rectangle shown represents the base of a rectangular prism. Use the ruler provided to measure the length and width of the rectangle to the nearest $\frac{1}{4}$ inch.



The height of the prism is 2 inches. Which measurement is closest to the volume of the prism in cubic inches?

A. 27 $in.^3$

B. 22 $in.^3$

C. 11 $in.^3$

D. 12 $in.^3$

25. The total number of items sold by each student who participated in a fund-raiser is shown in the stem and leaf plot.

Items Sold

Stem	Leaf
1	2 5 5 5 8
2	2 2 3 6 7 9
3	0 0 1 1 2 6
4	1 2 8 8 9 9

1|2 means 12 items.

Which statement is best supported by the data in the stem and leaf plot?

A. The number of students who sold between 10 and 20 items is greater than the number of students who sold more than 40 items.

B. The number of students who sold more than 30 items is greater than the number of students who sold fewer than 30 items.

C. The most common number of items sold is 30.

D. The most common number of items sold is 15.

26. The area of a rectangle is 45.5 square inches. The base of the rectangle is 7 inches.

What is the height of the rectangle in inches?

A. 318.5 in.

B. 6.5 in.

C. 15.75 in.

D. 38.5 in.

27. Which list shows the numbers in order from least value to greatest value?

A. $-\frac{2}{5}\ -2.47\ -2\frac{1}{2}\ 5\ \frac{21}{4}$

B. $-\frac{2}{5}\ -2.47\ -2\frac{1}{2}\ \frac{21}{4}\ 5$

C. $-2\frac{1}{2}\ -2.47\ -\frac{2}{5}\ 5\ \frac{21}{4}$

D. $-2\frac{1}{2}\ -2.47\ -\frac{2}{5}\ \frac{21}{4}\ 5$

28. Which situation can be represented by $17.35x > 624.60$?

A. A waitress had received a $17.35 tip. This brought her total in tips to more than $624.60. How much money in tips did she have before the $17.35 tip?

B. Brianda made a deposit of $17.35 into a savings account. This brought the total in her savings account to $624.60. How much money did she have in this savings account before she made the deposit?

C. A dozen tamales cost $17.35 including tax. How many dozen tamales can a customer buy with $624.60?

D. Darren earns $17.35 per hour at his job. How many hours does he need to work in order to earn more than $624.60?

29. Patricia recorded the prices of watches at a store. The prices are shown in the table.

Watches

Price (dollars)
15
22
16
24
16
20
12
27

What is the median price of the watches in dollars?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

30. A recipe for cookies requires $\frac{2}{3}$ cup of butter. Rama wants to make $\frac{3}{4}$ of the recipe. How many cups of butter should Rama use to make the cookies?

A. $1\frac{5}{12}$ c

B. $\frac{8}{9}$ c

C. $\frac{1}{12}$ c

D. $\frac{1}{2}$ c

31. Timothy has a set of plastic squares. The table shows the relationship between *A*, the area of each square in square centimeters, and *s*, the side length of each square in centimeters.

Timothy's Squares

Area, A (square centimeters)	1	4	49	64
Side Length, s (centimeters)	1	2	7	8

Which equation can be used to represent the relationship between *A* and *s* for these squares?

A. $A = s$

B. $A = s \cdot s$

C. $A = 2 + s$

D. $A = s + s$

32. Which situation can be represented by the equation $y = 74x$?

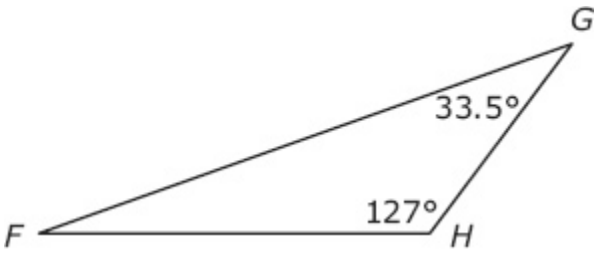
A. A company uses a total of y gallons of water at a rate of 74 gallons per hour for x hours.

B. A restaurant serves a total of y meals in one day, in which 74 meals are served during the first hour and x meals are served during the remaining hours.

C. A company manufactures a total of 74 drinking glasses every hour, with x of the glasses made of clear glass and y of them made of blue glass.

D. A restaurant prepares a total of y batches of pizza sauce from 74 pounds of tomatoes, with each batch weighing x pounds.

33. In triangle FGH shown below, what is the measure of $\angle F$ in degrees?



Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

34. There are 90 girls and 60 boys in the sixth grade at a middle school. Of these students, 9 girls and 3 boys write left-handed. What percentage of the sixth graders at this middle school write left-handed?

A. 10%

B. 8%

C. 5%

D. 15%

35. Which two expressions are equivalent?

A. $9(6 + x)$
$9 \bullet 6 + 9 \bullet x$

B. $x + (8 \bullet 9)$
$(x + 8) \bullet 9$

C. $8 \bullet 6 \div x$
$8 \bullet x \div 6$

D. $6 \bullet x + 3$
$6 \bullet (x + 3)$

36. A grocery store clerk put only packages of flour tortillas and packages of corn tortillas on a shelf. The ratio of the number of packages of corn tortillas to the total number of packages on the shelf was 7 to 16.

Which number could be the number of packages of flour tortillas the clerk put on the shelf?

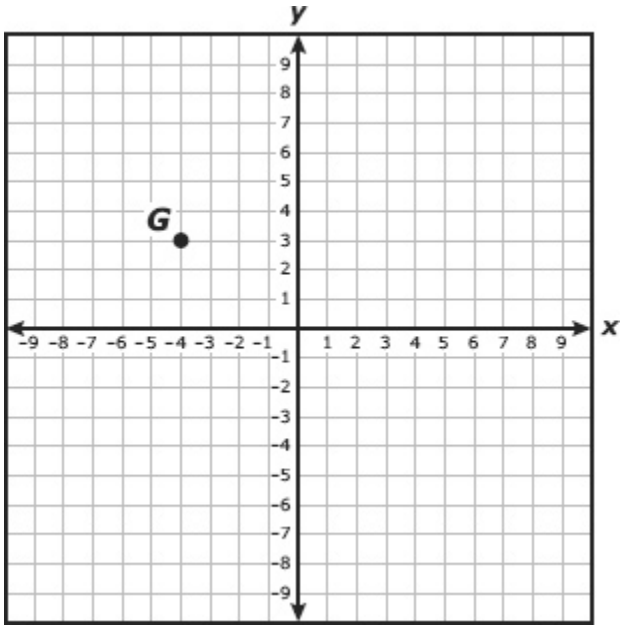
A. 23

B. 18

C. 14

D. 32

37. Benisha graphed point *G* on the coordinate grid. She will graph point *H* at a location 5 units away from point *G*.



Which ordered pair could represent the location of point *H*?

A. (−4, 5)

B. (−9, 8)

C. (1, 3)

D. (−4, −1)

38. Riley received financial assistance to pay for his college education. After he graduates, he will have to pay back the amount of money he received plus any interest that accrues after graduation.

Which kind of financial assistance did Riley receive?

A. Student loan

B. Scholarship

C. Work-study

D. Savings plan

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