Name: _____ **Date:** _____

1. The school office ordered 24 boxes of pens. Their total cost was $191.52. What was the cost of 1 box of pens?

   A. $7.02 B. $7.20

   C. $7.98 D. $8.00

2. Kate bought a bag of grapes that was 3.2 pounds. The bag of grapes cost $6.24.

   What was the price per pound for the bag of grapes?

   A. $1.90 B. $1.95

   C. $2.00 D. $2.08

3. The table below shows the late fees charged for overdue library books.

Library Late Fee Charges

Days Overdue	Late Fee Charge
1	$0.05
2	$0.10
3	$0.20
4	$0.35
5	$0.55

   The pattern continues. What is the late fee charge for a book that is 7 days overdue?

   A. $0.75 B. $0.80

   C. $1.05 D. $1.10

4. If bananas cost 35¢ per pound, how much will 4 pounds cost?

   A. $0.39 B. $1.20

   C. $1.29 D. $1.40

5. Marcus spent $3.25 to wash his car. If one quarter operates the car wash for 60 seconds, how long did it take him to wash his car?

   A. 10 minutes B. 13 minutes

   C. 16 minutes D. 32.5 minutes

6. Mr. Ogata drove 276 miles from his house to Los Angeles at an average speed of 62 miles per hour. His trip home took 6.5 hours. How did his speed on the way home compare to his speed on the way to Los Angeles?

   A. It was about 2 miles per hour faster.

   B. It was about 2 miles per hour slower.

   C. It was about 20 miles per hour faster.

   D. It was about 20 miles per hour slower.

7. You need a new pair of sneakers and find the following two ads in the newspaper for the same type of sneaker.

Sneaker City	Active Feet
New sneakers $45.95 On sale this week take 10% off (plus 6% sales tax)	New sneakers $54.50 On sale this week take 20% off (plus 6% sales tax)

At which store would you pay *less* for the sneakers? Show you work and explain how you arrived at your answer.

8. Which of the following is equivalent to $7(5n + 1)$?

A. $36n$ B. $42n$

C. $35n + 1$ D. $35n + 7$

9. The cost of materials needed to make a sail is represented by the equation below where C is the cost and b is the length of the base of the sail.

$$C = \frac{b}{2} + 10$$

Which shows the equation solved for b?

A. $b = C + 12$ B. $b = C - 12$

C. $b = 2C - 10$ D. $b = 2C - 20$

10. Which of the following is equivalent to $3(8x + 2)$?

A. $26x$ B. $30x$

C. $24x + 2$ D. $24x + 6$

11. What is the value of $8x + 2y$ when $x = 5$ and $y = 9$?

A. 24 B. 58 C. 61 D. 82

12. Look at the expression.

$6n + 3$

What is the value of the expression when $x = \frac{2}{3}$?

A. 6 B. 7 C. $7\frac{2}{3}$ D. $9\frac{2}{3}$

13. A go-cart has a maximum weight limit of 240 pounds. Which inequality correctly represents this weight limit, w?

A. $w \leq 240$ pounds B. $w < 240$ pounds

C. $w \geq 240$ pounds D. $w > 240$ pounds

14. What is the solution to the inequality $x - 5 > 14$?

A. $x > 9$ B. $x > 19$

C. $x < 9$ D. $x < 19$

15. **Spring Break**
Working with Data: Probability and Statistics

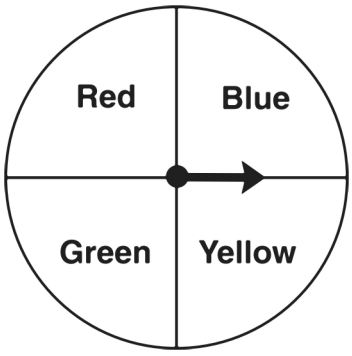
A reporter for the school newspaper asked 75 randomly selected students if they would be traveling over spring break. Students who responded that they would be traveling were asked whether they would be traveling by plane, train, car, or bus. The table below shows the results of the poll.

Student Travel Over Spring Break

Travel Plans	Number of Students
Not traveling	34
Traveling by plane	10
Traveling by train	6
Traveling by car	23
Traveling by bus	2

The school has 480 students. Based on the results of the poll, how many of the school's students should be expected to travel by plane over spring break?

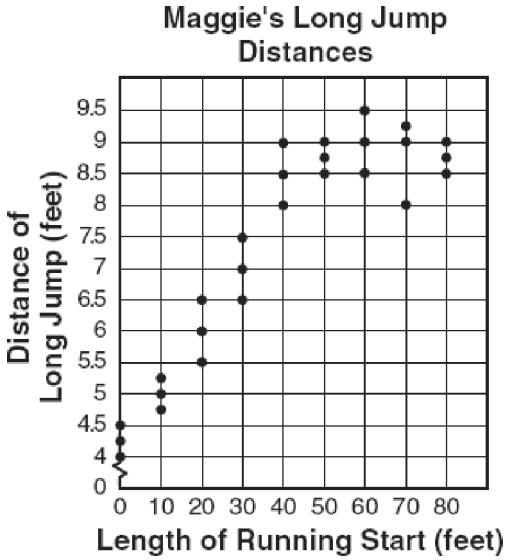
16. During a class activity, Kyle spun the arrow shown below many times.



The arrow landed on blue 12 times. Which is *most likely* the number of times Kyle spun the arrow?

A. 25 B. 50 C. 100 D. 400

17. Maggie made the scatter plot below to record the distances she jumped with different running start lengths.



Which is the distance of Maggie's longest jump when she had a running start of 20 feet?

A. 4.5 feet B. 6 feet

C. 6.5 feet D. 9 feet

18. Which expression below has been simplified using the correct procedure?

A. $2 + 4(x + 2)$
$2 + 4x + 8$
$4x + 10$

B. $2 + 5(x - 7)$
$7(x - 7)$
$7x - 49$

C. $4 - 7(x + 5)$
$4 - 7x + 5$
$-7x + 9$

D. $7 - 3(x - 5)$
$7 - 3x - 15$
$-3x - 8$

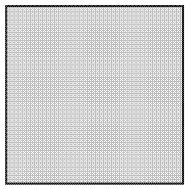
19. What is the value of the expression below?

$$4 - 2^3 \cdot 3$$

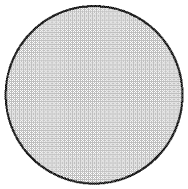
A. -20 B. -14 C. 18 D. 24

20. **Landscape Architect's Designs**

A landscape architect used the entire length of an 80-foot rope to lay out a flower bed in the shape of a square. In another area, he used the entire length of the same rope to lay out a second flower bed in the shape of a circle. (Drawings not to scale.)



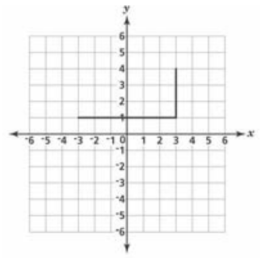
Perimeter = 80 feet



Circumference = 80 feet

How many square feet greater is the area of one flower bed than the other? Show your work or explain how you found your answer. (Use 3.14 for π)

21. Which point on the coordinate plane would be the missing corner of the rectangle below?



A. (3, 1) B. (−3, 4)

C. (3, 4) D. (−3, 1)

22. A model of a statue is 10 inches tall. The scale factor of the model to the actual statue is $\frac{5}{2}$ inches = 8 feet. How tall is the actual statue?

A. 16 feet B. 32 feet

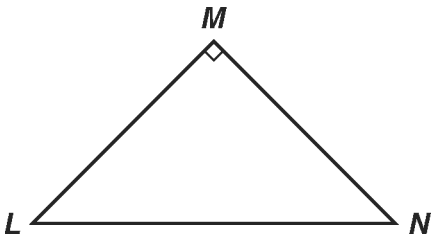
C. 80 feet D. 200 feet

23. A model of a house is built to scale of 1 : 10. The original house has a height of 15 feet. What is the height of the model?

A. $1\frac{1}{2}$ feet B. $\frac{2}{3}$ feet

C. 5 feet D. 10 feet

24.



Triangle *LMN* is a right triangle, and angles *L* and *N* are equal. What is the measure of angle *L*?

A. 25° B. 45° C. 70° D. 90°

25. Two angles of a triangle add up to 65°. What is the measure of the third angle?

A. 25° B. 55° C. 115° D. 295°

26. Jessica deposits $300 into a savings account that pays an annual interest rate of 2%, compounded twice a year. How much money will Jessica have in her account at the end of one year?

A. $304.00 B. $306.00

C. $306.03 D. $312.12

27. Which of the following fractions is equivalent to 0.2×0.6?

A. $\frac{3}{25}$ B. $\frac{12}{25}$ C. $\frac{3}{5}$ D. $\frac{6}{5}$

Name:_____ Grade 8 ORQ prompt

In the 2011-12 school year, after years of regularly seeing students half asleep in class, Nauset Regional High School on the Cape delayed the start of the school day by 65 minutes. Thomas Conrad, principal of the 1000-plus student school in North Eastham, said the preliminary findings show that with the 8:30 a.m. start time there has been a 53 percent drop in the number of failing grades, and the number of days students were suspended for disciplinary reasons dropped from 166 to 19.

a. If Nauset High School had 200 failing grades in 2010-2011 school year, how many did they have after the time change in 2011-2012?

b. Use the formula for percent decrease (original # - new #)/(original #) to find the percent decrease of number of students suspended at Nauset High School for the 2011-2012 school year.

c. Use the information given about Nauset Regional High School to predict the following for Uxbridge High School which has 450 students:

How many failing grades would we expect before the time change? After the time change?