# STAR Test Sample Questions

## 5th Grade Mathematics

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# STAR Test Sample Questions

## 5th Grade Mathematics

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# Standardized Testing and Reporting - STAR

## Grade 5: Mathematics

***Algebra and Functions (Performance Level: Advanced) – Question 01***

**Which equation could have been used to create this function table?**

| $x$ | $y$ |
|---|---|
| −9 | −5 |
| −2 | 2 |
| 4 | 8 |
| 11 | 15 |

A $y = \frac{x}{2}$

B $y = 2x$

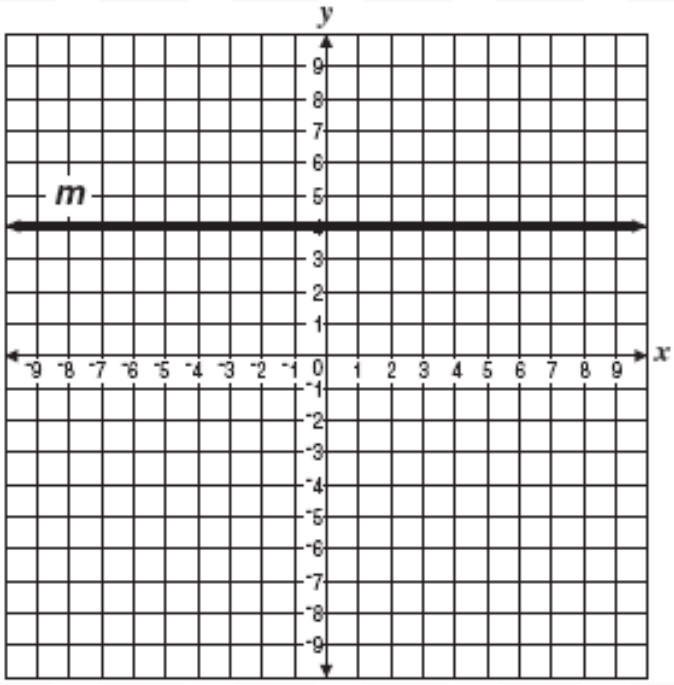
C $y = x - 4$

D $y = x + 4$

# Grade 5: Mathematics

*Algebra and Functions (Performance Level: Advanced) – Question 02*

**Line m is represented by the equation**




**Which ordered pair is located on line m?**

A (1, 4)
B (0, 0)
C (4, 1)
D (4, 0)

# Grade 5: Mathematics

*Algebra and Functions (Performance Level: Advanced) – Question 03*

**Which equation shows the relationship of all the values in the table below?**

| *x* | *y* |
|---|---|
| −2 | −6 |
| −1 | −3 |
| 0 | 0 |
| 1 | 3 |
| 2 | 6 |

A $y = 3x$

B $x = y + 3$

C $y = x + 3$

D $x = 3y$

# Grade 5: Mathematics

***Algebra and Functions (Performance Level: Advanced) – Question 04***

**Joaquin charges $4.00 per hour to baby-sit. What equation could Joaquin use to find the number of hours (h) he needs to baby-sit in order to earn $50.00?**

A ____ $4h = 50$

B $\frac{h}{4} = 50$

C $h - 4 = 50$

D $4 + h = 50$

# Grade 5: Mathematics

*Algebra and Functions (Performance Level: Advanced) – Question 05*

If $n = 31$, what is the value of $6 - n$?

A $-37$
B $-25$
C 25
D 37

# Grade 5: Mathematics

***Algebra and Functions (Performance Level: Proficient) – Question 01***

**What value for z makes this equation true?**

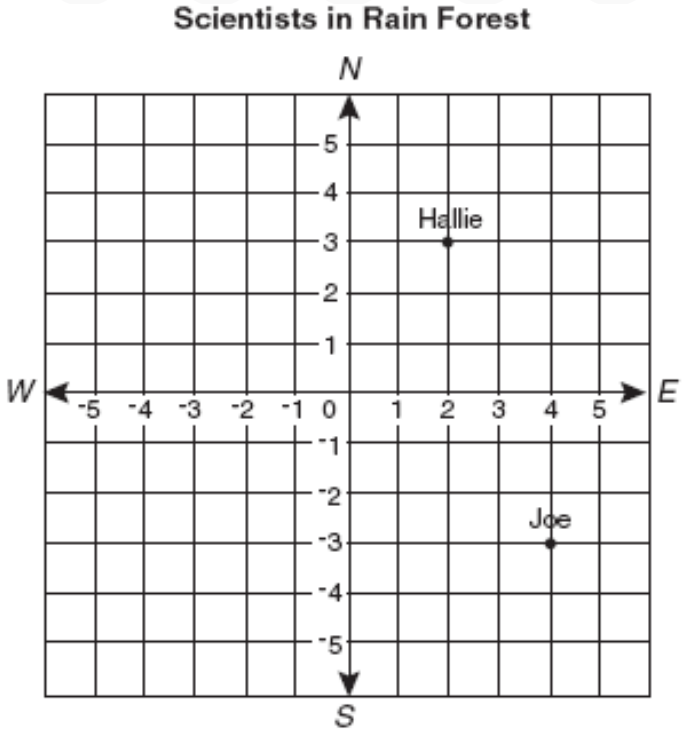
$$8 \times 37 = (8 \times 30) + (8 \times z)$$

A 7
B 8
C 30
D 37

# Grade 5: Mathematics

***Algebra and Functions (Performance Level: Proficient) – Question 02***

**The map below shows the starting positions of two scientists studying plants in a rain forest.**




**Which ordered pair best names Joe's location?**

A $(3,-4)$

B $(-3,4)$

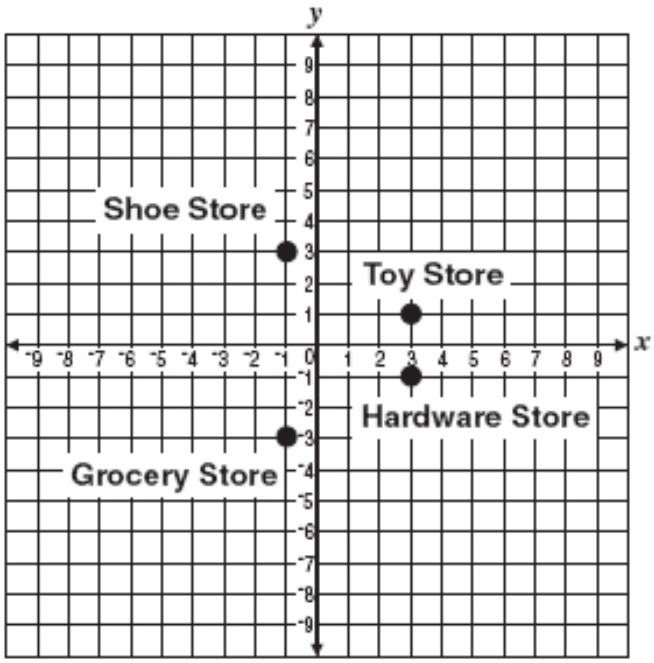
C $(4,-3)$

D $(-4,3)$

# Grade 5: Mathematics

***Algebra and Functions (Performance Level: Proficient) – Question 03***

**The map below shows the location of 4 different stores.**




**Which store is at the point $(3, -1)$?**

A Hardware Store
B Grocery Store
C Shoe Store
D Toy Store

# Grade 5: Mathematics

*Algebra and Functions (Performance Level: Proficient) – Question 04*

**Which table represents values of x and y such that $y = x + 5$**

**A**

| $x$ | $y$ |
|---|---|
| -1 | 4 |
| 0 | 5 |

**B**

| $x$ | $y$ |
|---|---|
| -1 | -6 |
| 0 | -5 |

**C**

| $x$ | $y$ |
|---|---|
| 2 | 5 |
| 5 | 0 |

**D**

| $x$ | $y$ |
|---|---|
| 2 | 3 |
| 3 | 0 |

# Grade 5: Mathematics

*Algebra and Functions (Performance Level: Proficient) – Question 05*

**Which expression represents the product of n and 25?**

A $25n$

B $25 - n$

C $25 + n$

D $25 \div n$

# Grade 5: Mathematics

***Algebra and Functions (Performance Level: Proficient) – Question 06***

If $k = 6$, what is the value of $7k - 2$ ?

A 30
B 40
C 54
D 65

# Grade 5: Mathematics

*Algebra and Functions (Performance Level: Basic) – Question 01*

**Sophie caught twice as many fish as her dad. If her dad caught F fish, how many fish did Sophie catch?**

A $F + 2$

B $F - 2$

C $F \times 2$

D $F \div 2$

# Grade 5: Mathematics

***Algebra and Functions (Performance Level: Basic) – Question 02***

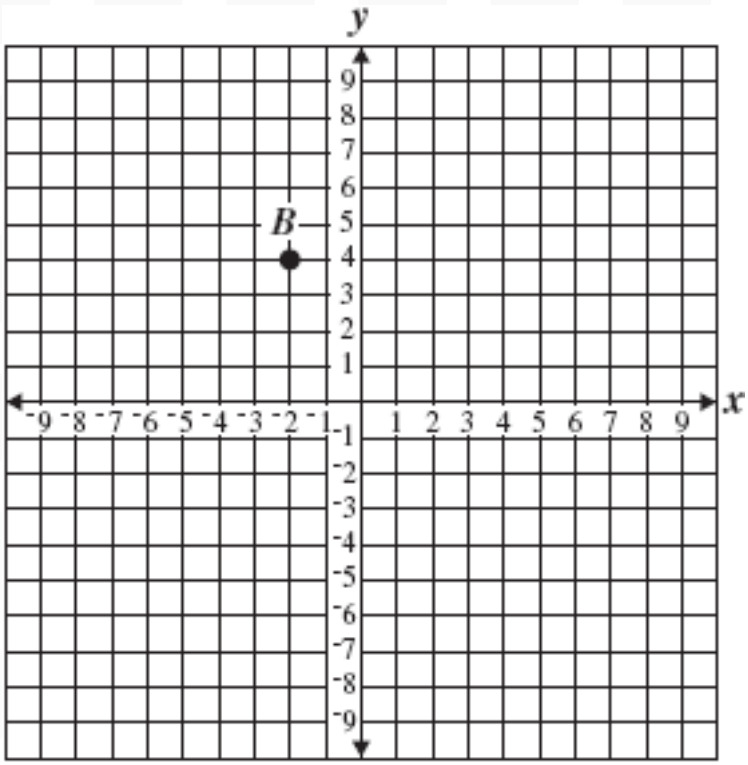
**If $z = 3$, what is $5 \times (6 - z)$?**

A 10
B 15
C 27
D 53

# Grade 5: Mathematics

***Algebra and Functions (Performance Level: Below Basic) – Question 01***

**What is the ordered pair for point B?**




A $(-4, 2)$

B $(-2, 4)$

C $(2, -4)$

D $(2, 4)$

# Grade 5: Mathematics

***Algebra and Functions (Performance Level: Below Basic) – Question 02***

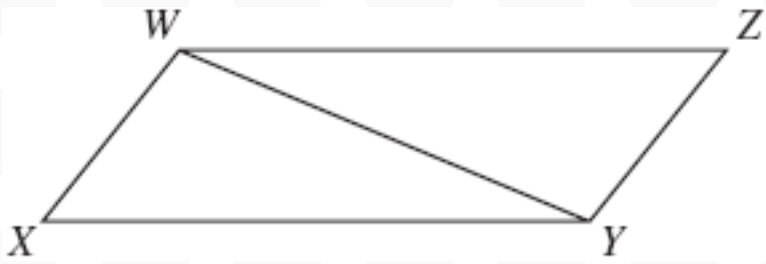
If $N = 4$, what is the value of $6 \times N - 3$?

A 6
B 9
C 18
D 21

# Grade 5: Mathematics

***Measurement and Geometry (Performance Level: Advanced) – Question 01***

**In the figure below, WXYZ is a parallelogram.**



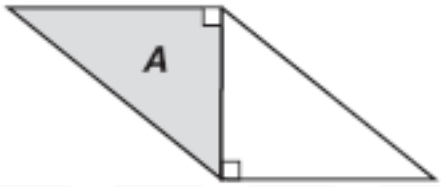

**If the area of triangle WXY is 22 square inches, what is the area of WXYZ?**

A 11 square inches
B 22 square inches
C 33 square inches
D 44 square inches

# Grade 5: Mathematics

***Measurement and Geometry (Performance Level: Advanced) – Question 02***

**In this parallelogram, triangle A has an area of 37 square feet.**




**What is the area, in square feet, of the parallelogram?**

A 18.5
B 37
C 55.5
D 74

# Grade 5: Mathematics

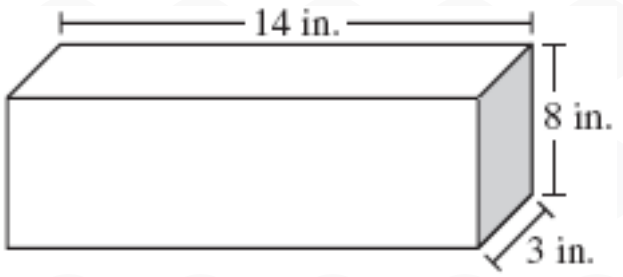
***Measurement and Geometry (Performance Level: Advanced) – Question 03***

**What is the volume of a cube that measures 10 inches on each edge?**

A 10 cubic inches
B 100 cubic inches
C 1000 cubic inches
D 10,000 cubic inches

# Grade 5: Mathematics

***Measurement and Geometry (Performance Level: Advanced) – Question 04***




**This rectangular prism has a length of 14 inches, a height of 8 inches, and a width of 3 inches. What is the volume?**

A 25 cu in.
B 42 cu in.
C 112 cu in.
D 336 cu in.

# Grade 5: Mathematics

***Measurement and Geometry (Performance Level: Advanced) – Question 05***

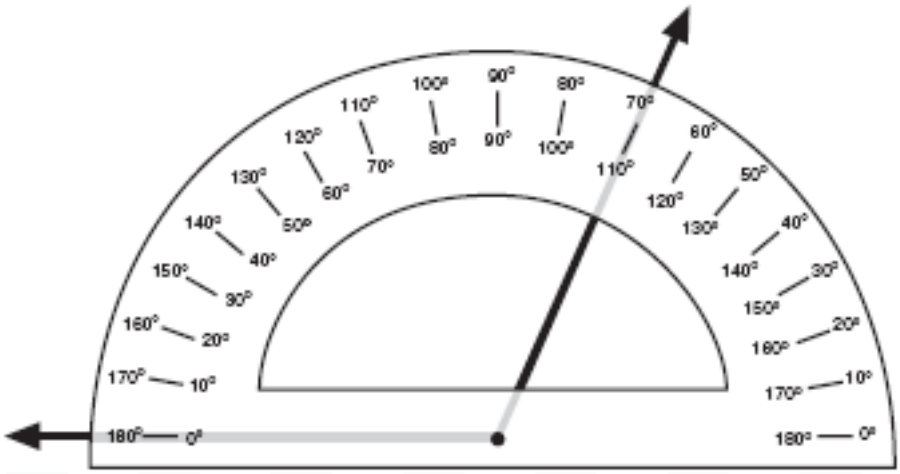
**A store has a rectangular parking lot that is 100 feet by 120 feet. What is the perimeter of the parking lot?**

A 220 feet
B 440 feet
C 1200 square feet
D 12,000 square feet

# Grade 5: Mathematics

***Measurement and Geometry (Performance Level: Advanced) – Question 06***

**Which is closest to the measure of the angle shown below?**




A $70°$

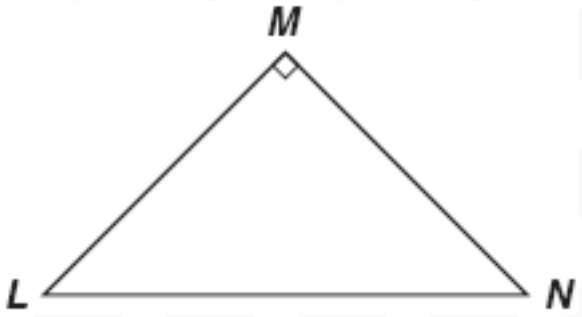
B $80°$

C $100°$

D $110°$

# Grade 5: Mathematics

***Measurement and Geometry (Performance Level: Advanced) – Question 07***




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

A $25°$

B $45°$

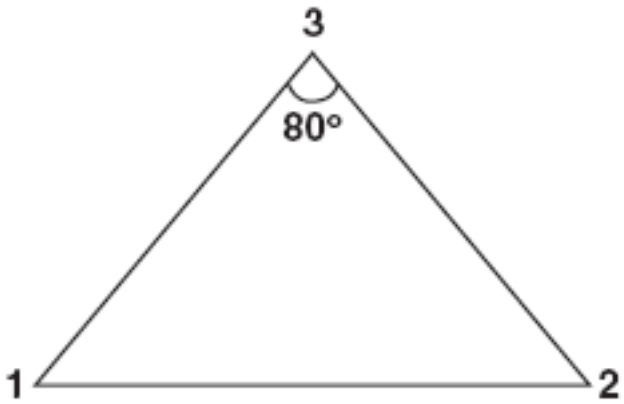
C $70°$

D $90°$

# Grade 5: Mathematics

*Measurement and Geometry (Performance Level: Advanced) – Question 08*

**Andrew constructed a triangle so that $\angle 1$ and $\angle 2$ were the same size and $\angle 3$ measured 80°.**



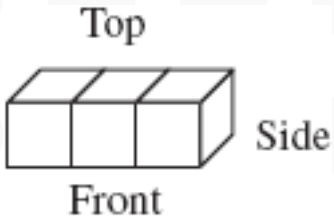

**What is the measure of $\angle 1$?**

A 50°
B 60°
C 80°
D 100°

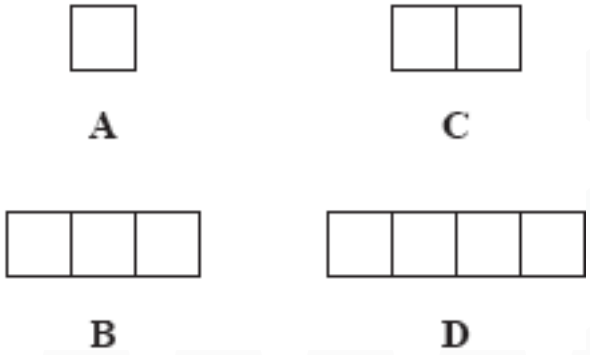
# Grade 5: Mathematics

***Measurement and Geometry (Performance Level: Advanced) – Question 09***

**The figure below is made of 3 small cubes.**




**Which best shows the side view of the figure?**



# Grade 5: Mathematics

***Measurement and Geometry (Performance Level: Proficient) – Question 01***

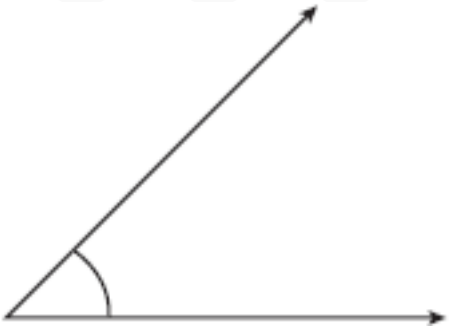
**What is the volume, in cubic inches, of the school locker below?**


A 2880
B 2580
C 390
D 360

# Grade 5: Mathematics

***Measurement and Geometry (Performance Level: Proficient) – Question 02***

**What is the approximate measure of this angle in degrees?**

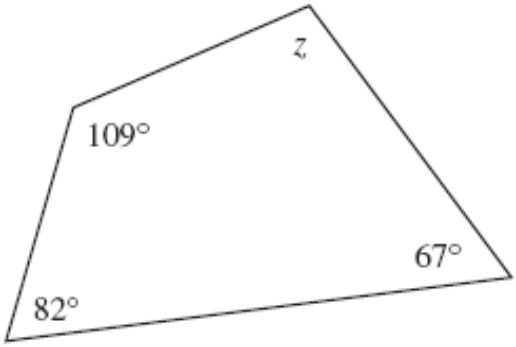


A 20°
B 45°
C 110°
D 135°

# Grade 5: Mathematics

***Measurement and Geometry (Performance Level: Proficient) – Question 03***

**What is the measure of angle z in the figure above?**




A 12°

B 102°

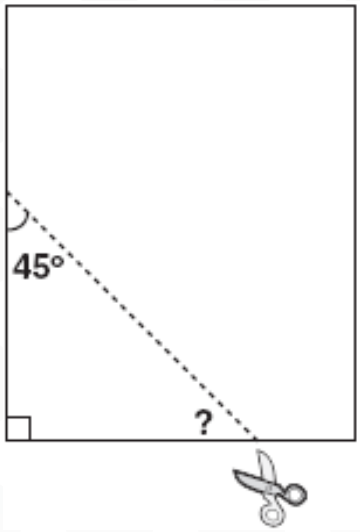
C 122°

D 180°

# Grade 5: Mathematics

***Measurement and Geometry (Performance Level: Proficient) – Question 04***

**Nina made a triangle by cutting the corner off a sheet of paper.**



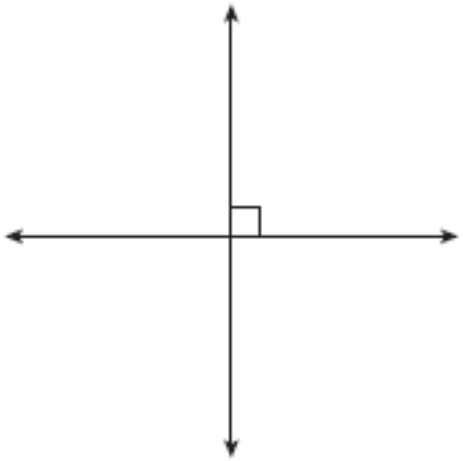

**One angle is 45°. What is the measure of the third angle of Nina's triangle?**

A 30°
B 45°
C 55°
D 60°

# Grade 5: Mathematics

***Measurement and Geometry (Performance Level: Basic) – Question 01***

**Which of the following best describes the figure below?**



A acute angles
B obtuse angles
C parallel lines
D perpendicular lines

# Grade 5: Mathematics

***Number Sense - Estimation, Percents, and Factoring (Performance Level: Advanced) – Question 01***

**What is 40% of 250?**

A 50
B 100
C 150
D 200

# Grade 5: Mathematics

***Number Sense - Estimation, Percents, and Factoring (Performance Level: Advanced) – Question 02***

**What is $\frac{3}{8}$ written as a percent?**

A 26.7%
B 30%
C 37.5%
D 50%

# Grade 5: Mathematics

***Number Sense - Estimation, Percents, and Factoring (Performance Level: Advanced) – Question 03***

**A company donated 200 books to a local library. If 70 of them are fiction, what percent of the donated books are fiction?**

A 35%
B 40%
C 60%
D 65%

# Grade 5: Mathematics

***Number Sense - Estimation, Percents, and Factoring (Performance Level: Advanced) – Question 04***

**What is the prime factorization of 36?**

A $2^2 \times 3^2$

B $2^2 \times 3^3$

C $4 \times 3^2$

D $4 \times 9$

# Grade 5: Mathematics

***Number Sense - Estimation, Percents, and Factoring (Performance Level: Proficient) – Question 01***

**The total land area for the United States is 3,537,438 square miles. What is this value rounded to the nearest thousand square miles?**

A 3,500,000
B 3,537,000
C 3,538,000
D 3,540,000

# Grade 5: Mathematics

***Number Sense - Estimation, Percents, and Factoring (Performance Level: Proficient) – Question 02***

**What is the prime factorization of 45?**

A $2^3 \times 5$

B $3^2 \times 5$

C $5^2 \times 3$

D $5^2 \times 9$

# Grade 5: Mathematics

***Number Sense - Estimation, Percents, and Factoring (Performance Level: Proficient) – Question 03***

**What is the prime factorization of 12?**

A $2^2 \times 3$

B $2^2 \times 3^2$

C $4 \times 3$

D $1 \times 2$

# Grade 5: Mathematics

***Number Sense - Estimation, Percents, and Factoring (Performance Level: Basic) – Question 01***

$$5^3 =$$

A $5 \times 5 \times 5$

B $5 + 5 + 5$

C $3 \times 3 \times 3 \times 3 \times 3$

D $3 + 3 + 3 + 3 + 3$

# Grade 5: Mathematics

***Number Sense - Estimation, Percents, and Factoring (Performance Level: Basic) – Question 02***

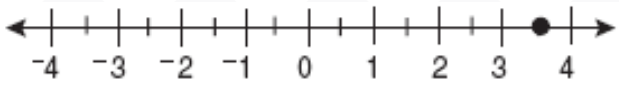
**Which letter on the number line best identifies the location of $-6$?**


A P
B Q
C R
D S

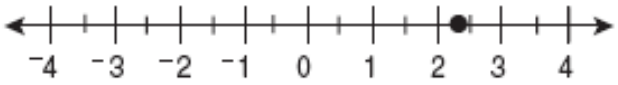
# Grade 5: Mathematics

***Number Sense - Estimation, Percents, and Factoring (Performance Level: Basic) – Question 03***

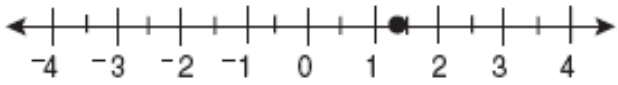
**Which point on the number line best represents 1.35?**



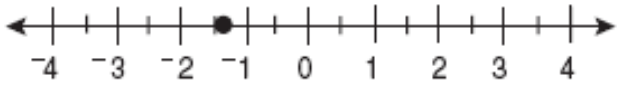

**A**




**B**




**C**




**D**

# Grade 5: Mathematics

***Number Sense - Estimation, Percents, and Factoring (Performance Level: Below Basic) – Question 01***

**What is the decimal 0.7 written as a fraction?**

A $\frac{1}{7}$

B $\frac{3}{4}$

C $\frac{3}{7}$

D $\frac{7}{10}$

# Grade 5: Mathematics

***Number Sense - Operations with Fractions and Decimals (Performance Level: Advanced) – Question 01***

$$15.12 \div 2.4 =$$

A 0.513
B 0.63
C 5.13
D 6.3

# Grade 5: Mathematics

***Number Sense - Operations with Fractions and Decimals (Performance Level: Advanced) – Question 02***

**It takes Suzanne $\frac{1}{6}$ hour to walk to the playground and $\frac{1}{3}$ hour to walk from the playground to school. How much time does it take Suzanne to walk to the playground and then to school?**

A $\frac{2}{9}$ hour

B $\frac{1}{3}$ hour

C $\frac{1}{2}$ hour

D $\frac{2}{3}$ hour

# Grade 5: Mathematics

***Number Sense - Operations with Fractions and Decimals (Performance Level: Proficient) – Question 01***

**Tony had a rope 8.35 meters long. He cut off 2.6 meters. How long was the piece of rope that was left?**

A 5.65 meters
B 5.75 meters
C 6.65 meters
D 6.75 meters

# Grade 5: Mathematics

***Number Sense - Operations with Fractions and Decimals (Performance Level: Proficient) – Question 02***

$$35,705 \div 37 =$$

A 89
B 843
C 925
D 965

# Grade 5: Mathematics

***Number Sense - Operations with Fractions and Decimals (Performance Level: Proficient) – Question 03***

**Maurice talked on the telephone to two friends.**

**He talked to Sherry for $\frac{1}{4}$ hour, and to Gabriel for $\frac{1}{3}$ hour. How much time did Maurice spend on the telephone?**

A $\frac{1}{6}$ hour

B $\frac{2}{7}$ hour

C $\frac{5}{12}$ hour

D $\frac{7}{12}$ hour

# Grade 5: Mathematics

***Number Sense - Operations with Fractions and Decimals (Performance Level: Proficient) – Question 04***

$$2\frac{1}{3}+4\frac{1}{2}=$$

A $6\frac{1}{6}$

B $6\frac{1}{5}$

C $6\frac{2}{5}$

D $6\frac{5}{6}$

# Grade 5: Mathematics

***Number Sense - Operations with Fractions and Decimals (Performance Level: Proficient) – Question 05***

**Hector can throw a ball $50\frac{3}{5}$ feet. Lee can throw the same ball $48\frac{1}{3}$ feet. How much farther can Hector throw the ball than Lee?**

A $2\frac{2}{15}$ feet

B $2\frac{4}{15}$ feet

C $2\frac{3}{5}$ feet

D $2\frac{4}{5}$ feet

# Grade 5: Mathematics

***Number Sense - Operations with Fractions and Decimals (Performance Level: Proficient) – Question 06***

$$\frac{1}{5} \cdot \frac{1}{6} =$$

A $\frac{1}{11}$

B $\frac{2}{11}$

C $\frac{1}{30}$

D $\frac{2}{30}$

# Grade 5: Mathematics

***Number Sense - Operations with Fractions and Decimals (Performance Level: Basic) – Question 01***

$$11.3 \times 2.7 =$$

A 29.31
B 29.51
C 30.31
D 30.51

# Grade 5: Mathematics

***Number Sense - Operations with Fractions and Decimals (Performance Level: Basic) – Question 02***

**Veronica can type 28 words per minute. At this rate, how many words can Veronica type in 5.5 minutes?**

A 154
B 157
C 159
D 162

# Grade 5: Mathematics

***Number Sense - Operations with Fractions and Decimals (Performance Level: Basic) – Question 03***

$$\begin{array}{r} 39.06 \\ \times \quad 0.3 \\ \hline \end{array}$$

A 9.708
B 9.718
C 11.608
D 11.718

# Grade 5: Mathematics

***Number Sense - Operations with Fractions and Decimals (Performance Level: Basic) – Question 04***

**At a school, there are 704 desks to place into 22 classrooms. If the same number of desks is placed in each classroom, how many desks will be in each room?**

A 32
B 34
C 42
D 44

# Grade 5: Mathematics

***Number Sense - Operations with Fractions and Decimals (Performance Level: Basic) – Question 05***

$$4\frac{3}{4} - 2\frac{1}{2} =$$

A $1\frac{1}{4}$

B $1\frac{3}{4}$

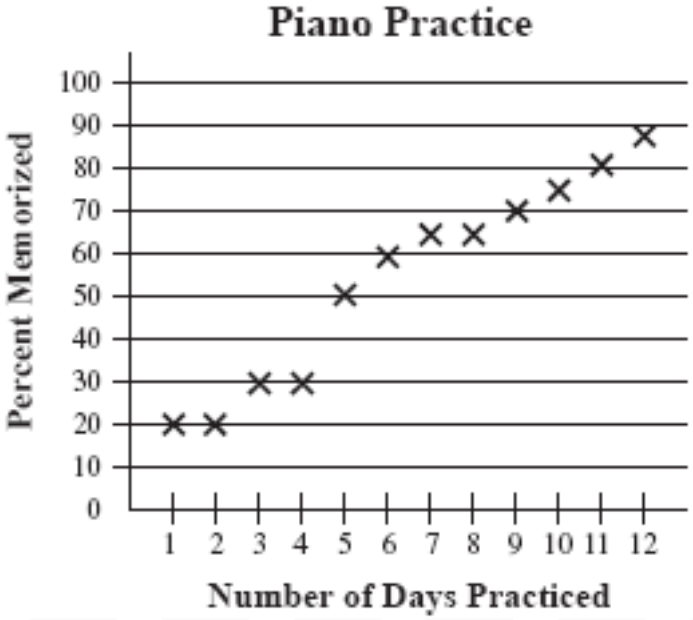
C $2\frac{1}{4}$

D $2\frac{3}{4}$

# Grade 5: Mathematics

***Statistics, Data Analysis, and Probability (Performance Level: Advanced) – Question 01***

**Regina's piano teacher kept this record of Regina's progress on a song she is memorizing.**




**How many days of practice did it take for Regina to memorize half of the song?**

A 4
B 5
C 6
D 8

# Grade 5: Mathematics

***Statistics, Data Analysis, and Probability (Performance Level: Basic) – Question 01***

**Sharice scored the following numbers of points in 5 dart games.**

**88, 96, 112, 135, 144**

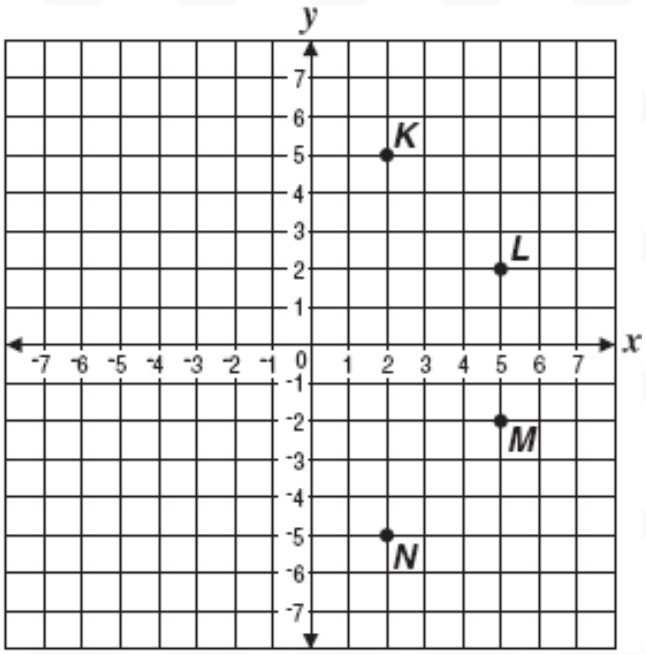
**What is the median of these numbers?**

A 56
B 88
C 112
D 115

# Grade 5: Mathematics

***Statistics, Data Analysis, and Probability (Performance Level: Basic) – Question 02***

**Which point represents (5, 2) on this graph?**




A point K
B point L
C point M
D point N

# Grade 5: Mathematics

***Statistics, Data Analysis, and Probability (Performance Level: Below Basic) – Question 01***

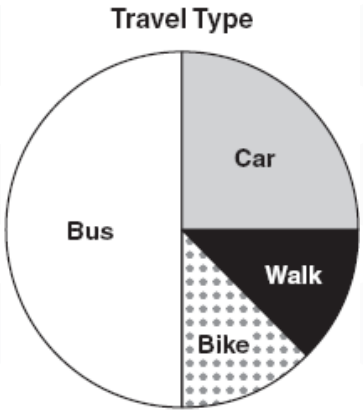
**Students were asked how they traveled to school each day. The table below shows these results.**

**Travel to School**

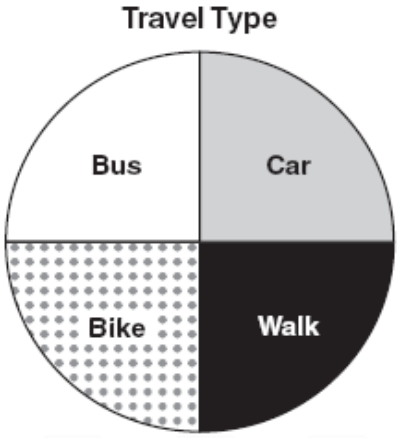
| Type of Travel | Percentage |
|---|---|
| Bus | 50% |
| Car | 30% |
| Walk | 15% |
| Bike | 5% |

**Which graphic correctly displays these data?**

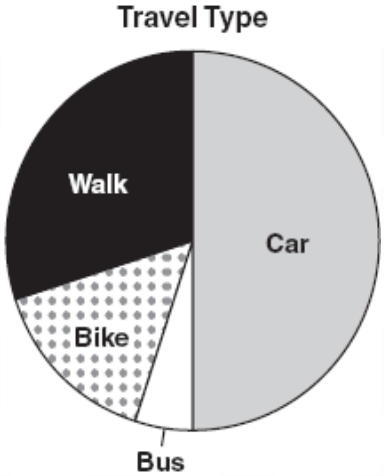
A




C




B

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