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6.2D (M)

3. The values of 4 musical notes are given below.

$$\frac{1}{8} \quad \frac{1}{2} \quad \frac{1}{16} \quad \frac{1}{4}$$
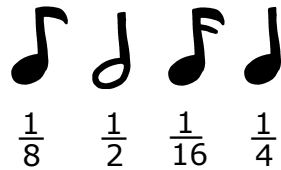
Which of the following shows the notes in order from greatest to least value?

A

B

C

D

6.7A (L)

4. What prime factors are represented by $5^3 \times 3^4$?

A 5 x 3 x 3 x 4

B 5 x 5 x 5 x 3 x 3 x 3 x 3

C 5 x 5 x 5 x 5 x 5 x 3 x 3 x 3

D 3 x 3 x 3 x 3 x 3 x 4 x 4 x 4

6.7B (M)

5. What is the difference between an algebraic expression and a numeric expression?

A An algebraic expression has a variable, but a numeric expression does not.

B A numeric expression has a variable, but an algebraic expression does not.

C An algebraic expression includes an equal sign, but a numeric expression does not.

D A numeric expression includes an equal sign, but an algebraic expression does not.

6.4D (L)

1. A vehicle can travel 225 miles in 3 hours. What is the vehicle's rate of travel in miles per hour?
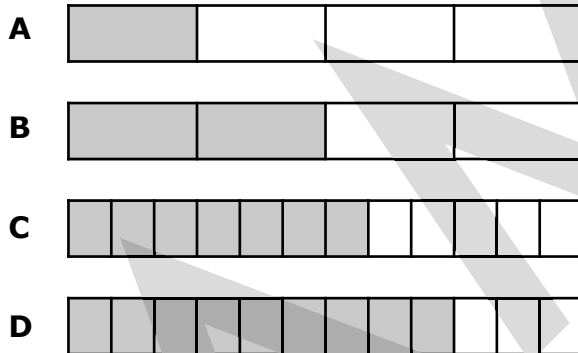
Record your answer in the boxes. Then fill in the bubbles. Be sure to use the correct place value.

6.4E (L)

2. In which diagram does the shaded portion represent 75%?
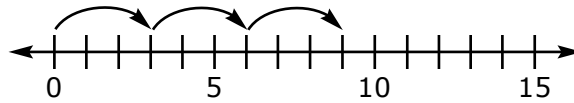
A

B

C

D

6.4G (L)

3. Clara spent $\frac{1}{2}$ of her allowance on a new blouse. To find how much she spent, you could multiply her total allowance by—

A 0.5

B 0.2

C 0.12

D 0.1

6.3C (M)

1. Which equation does the number line below best represent?

    A $3 \div n = 9$

    B $3 \times 3 = n$

    C $3 + n = 9$

    D $3 \times 9 = n$

6.3E (L)

2. Levi is traveling with his mom and sister to visit his grandparents. His grandparents live 183 miles away, and the family has traveled $\frac{1}{3}$ of the distance so far. How many more miles must they travel?

    A 45.75

    B 61

    C 91.5

    D 122

6.5B (M)

3. A bookstore manager wants to know how many fiction books and how many nonfiction books his store sold last month. The manager knows that the store sold 450 books in all last month and that 56% of those books were fiction. How many nonfiction books did the store sell last month?

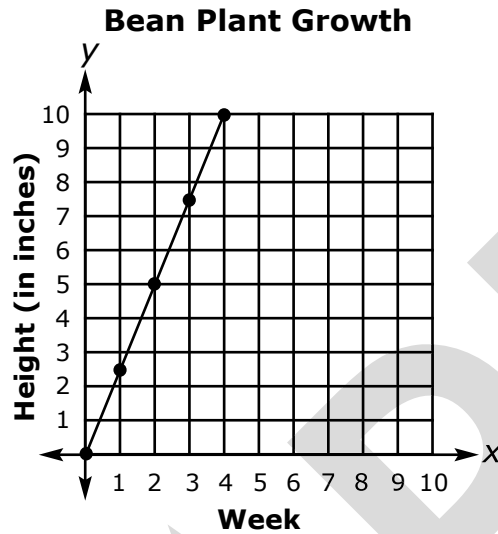Record your answer in the boxes. Then fill in the bubbles. Be sure to use the correct place value.

6.4A (M)

4. Sloan observed the growth of a bean plant in science class. She recorded the plant's growth on the graph below.

Bean Plant Growth

Sloan wrote an equation to find the height of the plant (*y*) after a given number of weeks (*x*). Which equation did Sloan write?

A $x = 2.5y$

B $y = 2.5x$

C $x = y + 2.5$

D $y = x + 2.5$

6.5A (M)

5. A manufacturing company produces microchips for smartphones. The table below shows the relationship between *s*, the number of microchips sold, and *p*, the total profit earned from microchip sales.

s	50	100	150	200	250
p	$475	$950		$1,900	$2,375

To find *p* when *s* is 150, the company should multiply 150 by a scale factor of—
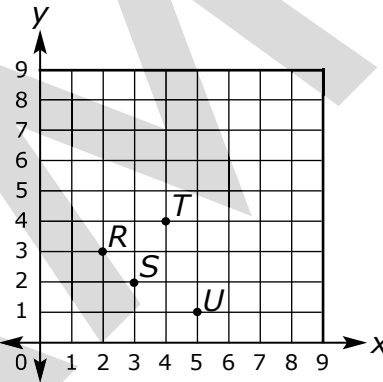
A 2.5

B 5

C 9.5

D 15

6.8D (L)

3. A triathlete built a rectangular lap pool that measured 2.5 meters by 50 meters by 2 meters in his backyard. How many cubic meters of water are needed to fill the pool?

Record your answer in the boxes. Then fill in the bubbles. Be sure to use the correct place value.

6.11A (L)

4. Which point best represents the ordered pair (3, 2)?

A Point *U*

B Point *T*
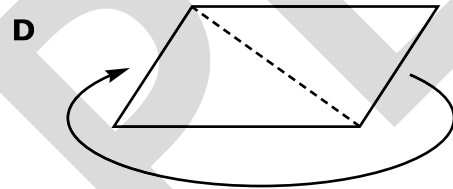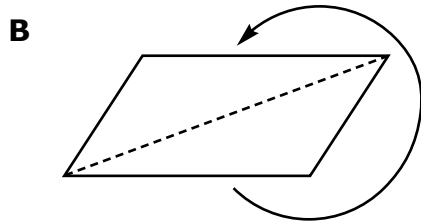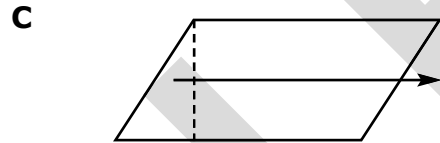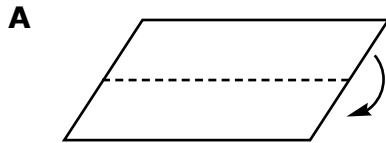
C Point *S*

D Point *R*

6.8B (H)

1. The area formula for a parallelogram is the same as the area formula for a rectangle.

$$A = lw$$

Which diagram correctly shows how to decompose a parallelogram to prove that its area formula is $A = lw$?

A

C

B

D

6.8C (M)

2. The heights, bases, and areas of some triangles are shown in the table below. Look at the pattern of numbers.

Height (units)	Base (units)	Area (square units)
2	16	16
4	32	64
6	b	
8	64	256

Which expression can be used to find the area, in square units, of a triangle with a height of 6 units and a base of b?

A $2(6b)$

B $\dfrac{6b}{2}$

C $\dfrac{2b}{6}$

D $\dfrac{(6 + b)}{2}$

6.12C (M)

1. The stem-and-leaf plot below shows the number of minutes it takes a company's employees to drive to work each morning.

Driving Time

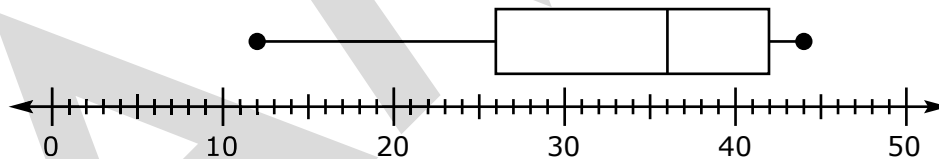| Stem	Leaf
0	6 9
1	1 3 7
2	0 2 2 8
3	1 2 4 4 8 9
4	0 3 5 8

Key: 1 | 1 = 11 minutes

What is the range and median of the data in the stem-and-leaf plot above?

A Range: 42   Median: 31

B Range: 40   Median: 28

C Range: 40   Median: 31

D Range: 42   Median: 28

6.13A (M)

2. Look at the box plot below.

Which of the following is true?

A Twenty-five percent of the data is greater than 12.

B Twenty-five percent of the data is greater than 26.

C Twenty-five percent of the data is greater than 36.

D Twenty-five percent of the data is greater than 42.

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6.14A (M)

1. The chart below lists four banks and some of their fees.

	First Federal Bank	**First State Bank**	**First City Bank**	**First Farmers' Bank**
Online Banking	Free	Free	Free	Free
Checking	$10 per month fee	$0.50 per check	Free Checking	$5 per month fee
Debit Card	$0.75 per transaction	No Fees	$1 per transaction	$2 per transaction
ATM Fees	No Fees	Bank ATM: $1 per transaction Nonbank ATM: $2.50 per transaction	$2.50 per transaction	Bank ATM: No fees Nonbank ATM: $2 per transaction

Last month, Geraldine wrote 3 checks. She also completed 6 debit card transactions, 4 bank ATM withdrawals, and 1 nonbank ATM withdrawal. Based on these banking activities, which financial institution from the chart above would be least expensive for Geraldine?

A First City Bank

B First Farmers' Bank

C First Federal Bank

D First State Bank

6.14C (L)

2. To correctly balance a check register, you—

A add deposits and add withdrawals

B add deposits and subtract withdrawals

C subtract deposits and add withdrawals

D subtract deposits and subtract withdrawals