6.2A: Classify whole numbers, integers, and rational numbers using a visual representation such as a Venn diagram to describe relationships between sets of numbers (Supporting Standard)

(6.1F)

1. The table below shows the classifications of real numbers.

**Classifications
of Real Numbers**

Category
Rational numbers
Integers
Whole numbers
Natural numbers

Which sets of numbers include only natural numbers?

Select **TWO** correct answers.

☐ $(\frac{1}{5}; \frac{1}{4}; \frac{1}{3}; \frac{1}{2})$

☐ $(1; 1.5; 2; 2.5; 3)$

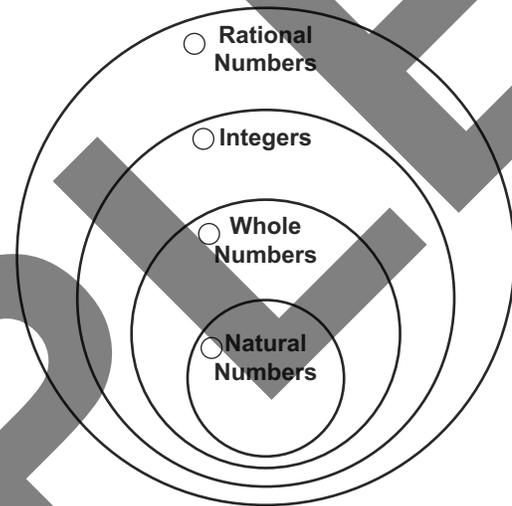☐ $(1; 2; 4; 6; 8; 10)$

☐ $(-2; -1; 0; 1; 2)$

☐ $(7; 6; 3,043; 2)$

(6.1F)

2. Which set of numbers includes both integers and whole numbers?

A $(0.5, 0.3, 0.1, 1, 3, 5)$

B $(-5, -3, -1, 1, 2, 3, 5)$

C $(-6, -4, -2, 0, \frac{1}{4}, \frac{1}{2})$

D $(1, 1.5, 2, 2.5, 3, 3.5, 4)$

(6.1D; 6.1E; 6.1F)

3. The Venn diagram below shows how real numbers can be classified.

In which category would $\frac{8}{5}$ appear?

Shade the **ONE** correct circle that represents the category.

(6.1F)

4. Which sets of numbers include only positive integers?

Select **TWO** correct answers.

☐ $(-3, -1, 0, 8, 12)$
☐ $(3, 7, 13, 22, 40)$
☐ $(0, 9, 26, 31, 44)$
☐ $(10, 12.5, 19, 24)$
☐ $(12, 16, 25, 42, 54)$

6.5C: Use equivalent fractions, decimals, and percents to show equal parts of the same whole (Supporting Standard)

(6.1A; 6.1B)

1. Deidra spelled 18 out of 24 words correctly on a test. What percent of the words did Deidra spell correctly?

A 18%

B 24%

C 65%

D 75%

(6.1A; 6.1B)

2. The chart below gives information about the population of Texas in 2013.

Texas Population (2013)

Population	People Under Age 18 (%)
26,448,193	26.6

Write an expression that shows how to find the number of people under the age of 18 in Texas in 2013.
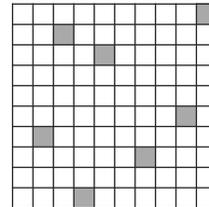
Record your answer in the space provided.

(6.1A; 6.1B)

3. A group of 210 children attended a school picnic. Only 60 of the children played volleyball at the picnic. What fraction of the children played volleyball?

A $\frac{1}{60}$

B $\frac{1}{21}$

C $\frac{1}{7}$

D $\frac{2}{7}$

(6.1D; 6.1F)

4. On the grid below, 7 small squares are shaded.

What percent of the grid is shaded?

Record your answer in the space provided.

6.7B: Distinguish between expressions and equations verbally, numerically, and algebraically (Supporting Standard)

(6.1F; 6.1G)

1. Mr. Johnson wrote the following math information on the whiteboard in his classroom.

$$65 + y = 72$$

Circle the correct option for each blank that completes the sentence below.

Mr. Johnson wrote a(n) _____**(a)**_____

_____**(b)**_____ .

(a) algebraic **or** **(a)** numeric

(b) equation **or** **(b)** expression

(6.1F; 6.1G)

2. What is the difference between an algebraic equation and a numeric equation?

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

B An algebraic equation has a variable, but a numeric equation does not.

C A numeric equation has an equal sign, but an algebraic equation does not.

D An algebraic equation has an equal sign, but a numeric equation does not.

(6.1D; 6.1F)

3. Mrs. McCoy wrote the following information on the whiteboard in her classroom.

> Tiffany has 4 stickers. Her cousin gives her 5 more. Tiffany now has a total of 9 stickers.

If Mrs. McCoy's students correctly wrote the same information as a numeric equation, which of the following did they write?

A $4 + 5$ **C** $4 + 5 = 9$

B $4 + c$ **D** $4 + c = 9$

(6.1A; 6.1D; 6.1F)

4. At a picnic, Melissa cooked 12 hot dogs for the adults. She also cooked 15 hot dogs for the children. Which of the following is a numeric equation that correctly shows how many hot dogs Melissa cooked?

A $12 + 15$ **C** $15 - 12 = 3$

B $15 - 12$ **D** $12 + 15 = 27$

(6.1F)

5. Determine whether each relationship is an expression or an equation.

Select the correct answer in each row.

| Relationship	Expression	Equation
$6 + 7$	☐	☐
$6 + g$	☐	☐
$6 + 7 = 13$	☐	☐
$6 + g = 13$	☐	☐

6.5A: Represent mathematical and real-world problems involving ratios and rates using scale factors, tables, graphs, and proportions (Supporting Standard)

(6.1A; 6.1E; 6.1F)

1. Mr. Radford pays gym membership dues of $45 per month. Which three points lie on the line that best represents the total amount paid for the membership, *a*, for *m* months?

Shade the **THREE** correct circles that represent the points.
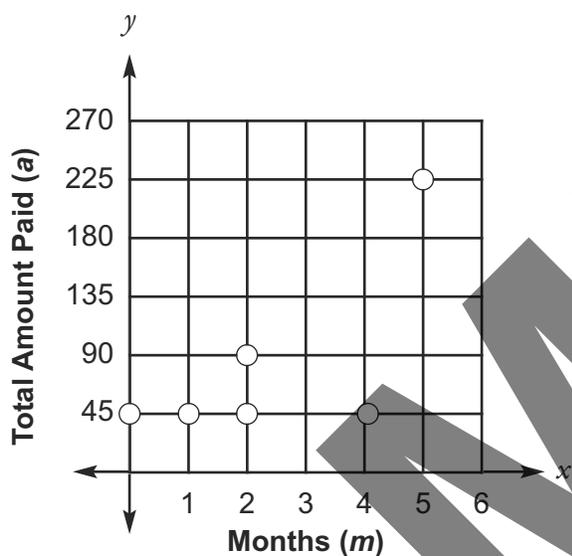
(6.1A; 6.1E; 6.1F)

2. Melinda is riding a train to her grandma's house. The train travels at a constant rate of 45 miles per hour. Which table represents the relationship between *h*, the number of hours Melinda travels, and *d*, the distance she travels over a certain length of time?

A

h	d
1	45
3	90
5	135

B

h	d
1	45
3	135
5	225

C

h	d
1	45
2	135
3	225

D

h	d
1	45
2	45
3	45

6.9B: Represent solutions for one-variable, one-step equations and inequalities on number lines (Supporting Standard)

(6.1D; 6.1E; 6.1F)

1. Which number line correctly represents the possible values of *s* in $\frac{s}{5} < 20$?
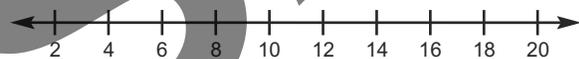
A

B

C

D
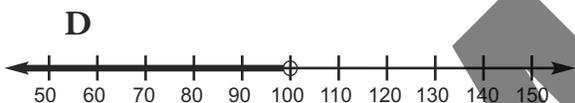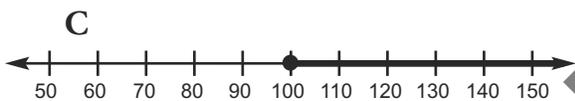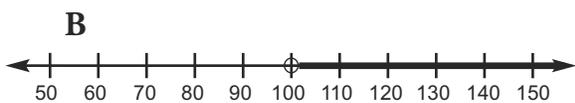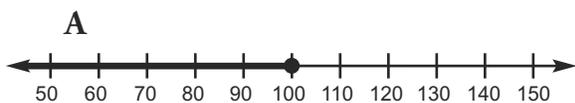
(6.1D; 6.1E; 6.1F)

2. Jackie needs at least $350 for a plane ticket. She saves $25 each week.

Use the number line to represent the number of weeks Jackie will need to save money to be able to buy the plane ticket.

Draw an open or closed circle and a ray to indicate the direction.

(6.1D; 6.1E; 6.1F)

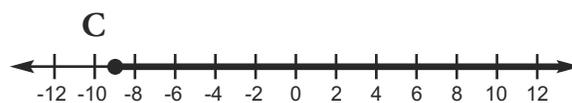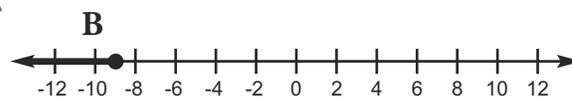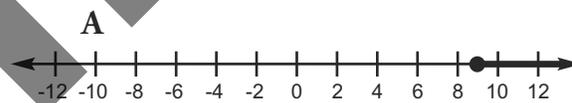**3.** The Deegan family spent more than $500 at a theme park.

Use the number line to represent the total amount of money the family spent.

Draw an open or closed circle and a ray to indicate the direction.
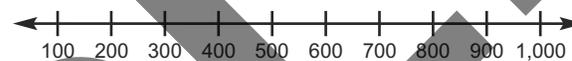
(6.1D; 6.1E; 6.1F)

4. Which number line correctly represents the possible values of *y* in -6*y* ≤ 54?

A

B

C

D