Name _____ Date _____

Number Sense

Modeled Instruction

DIRECTIONS: Read each question and choose the best answer. Use the answer sheet provided at the end of the workbook to record your answers. If the correct answer is not available, mark the letter for "Not Here."

1. Brandi made $\frac{4}{5}$ pound of trail mix and divided the mix into 4 equal portions. What is the weight of each portion?

A $\frac{1}{10}$ pound

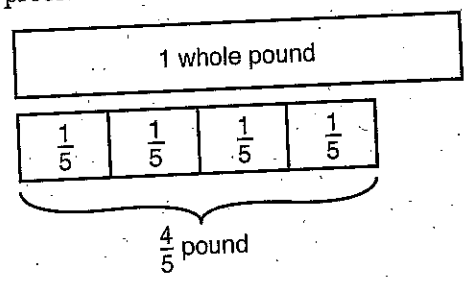
B $\frac{1}{8}$ pound

C $\frac{1}{5}$ pound

D $\frac{1}{4}$ pound

Hint

You can use a tape diagram to visualize this problem.



2. City workers are repaving a street that is $2\frac{3}{4}$ miles long. If they repave $\frac{1}{4}$ mile per day, how long will it take to repave the entire street?

F 11 days

G 9 days

H 7 days

J 5 days

Hint

Think, "How many quarter miles are there in $2\frac{3}{4}$ miles?" Because the denominators involved are 4, you can rewrite the fractions as decimals and divide.

$2.75 \div 0.25 = d$

Name _____ Date _____

3. Factory workers packaged 2,688 pens into 24 boxes. Each box contained the same number of pens. How many pens are in each box?

A 100 pens

B 112 pens

C 124 pens

D 136 pens

Hint

Use number sense to choose an operation. The problem tells you 2,688 was separated into 24 equal groups. When you see that each box contains the same number of pens, you should divide.

4. Tabitha's parents deposited a total amount of $6,300.00 into her college fund during a 36-month period. They deposited the same amount each month. What was their monthly contribution to Tabitha's college fund?

F $75.00

G $150.00

H $175.00

J $200.00

Hint

The problem tells you to break apart $6,300.00 into 36 equal amounts. This means you should divide.

5. Jordan is comparing the lengths of two leaves. One leaf is 3.33 centimeters long, and the other leaf is 7.01 centimeters long. What is the difference in length between the two leaves?

A 10.34 centimeters

B 6.677 centimeters

C 3.77 centimeters

D 3.68 centimeters

Hint

You subtract to find the difference between two measurements. Watch for regrouping.

6. There should be 6.14 grams of salt in a solution. If 1.8 grams of salt have been added to the solution, how many more grams of salt need to be added?

F 4.94 grams

G 4.34 grams

H 4.32 grams

J 2.34 grams

Hint

The problem asks how many more grams are needed. You can subtract to find the difference. Notice the decimals do not have the same number of decimal places, so align the numbers on the decimal point.

Name _____ Date _____

7. Maria works 18.5 hours each week at a shoe store. She earns $9.52 per hour. How much does Maria earn each week?

A $190.00

B $176.12

C $175.75

D $17.61

Hint

You multiply hours × salary to find total earnings. $18.5 \times \$9.52 = s$

8. A piece of land measuring 216.144 square kilometers was divided and then sold in equal parts to 12 different people. How many square kilometers did each person buy?

F 0.18012 square kilometer

G 1.8012 square kilometers

H 18.012 square kilometers

J 180.12 square kilometers

Hint

It is clear you will use division to solve this problem. Since there are so many places in the dividend, use estimation to check your answer. Look for multiples near the original numbers that are easy to divide in your head, such as $216 \div 12 = 18$.

The answer should be close to 18.

9. What is the least common multiple (LCM) of 6 and 15?

A 6

B 15

C 30

D 60

Hint

The least common multiple, or LCM, is the least (smallest) number that two or more numbers have in common in their list of nonzero multiples. Why can't 6 or 15 be the least common multiple in this case?

10. What is the GCF (Greatest Common Factor) of 18 and 45?

F 45

G 18

H 15

J 9

Hint

A common factor is a number that is a factor of two or more numbers. The greatest common factor, or GCF, is the greatest factor that two or more numbers have in common.

Name _____ Date _____

11. Which equation uses the Distributive Property to express the sum of 9 and 27 as a product?

A $9 + 27 = 9(1 + 3)$

B $9 + 27 = 27 + 9$

C $9 + 27 = 36$

D $9 + 27 = 9 \times 2 + 18$

Hint

Write each number as the product of the GCF (Greatest Common Factor) and another factor. The GCF is 9.

$9 = 9 \times 1$ $\quad 27 = 9 \times 3$

Look for an equation multiplying the GCF and the sum of the two factors.

12. Which situation could be represented by the integer $+13$?

F A city is 13 feet above sea level.

G A football team loses 13 yards on a play.

H A withdrawal of $13.00 is made from a bank account.

J A student answers 13 items incorrectly.

Hint

Positive numbers are always greater than, or above, 0. Sea level is generally considered to be at 0.

13. What is the opposite of -4?

A -4

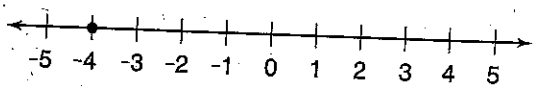
B 0

C 4

D Not Here

Hint

Think of a number line. Opposite numbers are the same distance from 0.



14. Which expression has the same value as $-(-6)$?

F 0

G $6 - 6$

H 6

J -6

Hint

You should read this expression as "the opposite of negative 6." It is easier to see that the opposite of a negative number is positive.

Name _____ Date _____

15. A baseball stadium is represented by the point $(-3, -5)$ on a coordinate plane. In which quadrant does the point lie?

A Quadrant I

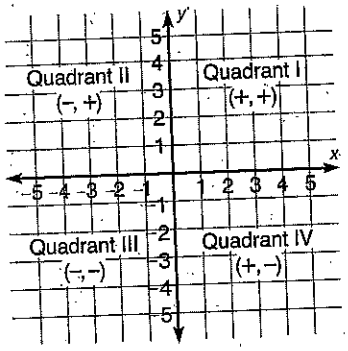
B Quadrant II

C Quadrant III

D Quadrant IV

Hint

Visualize a coordinate plane to answer this question. You start counting quadrants with the top right quadrant.



16. Which two points are reflected across the y-axis?

F $(2, 4)$ and $(-2, 4)$

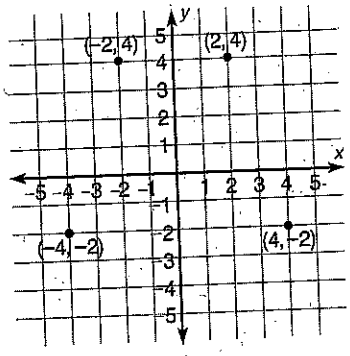
G $(2, 4)$ and $(4, -2)$

H $(2, 4)$ and $(-4, -2)$

J Not Here

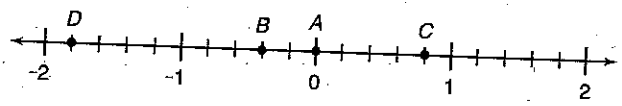
Hint

Two points are reflections of each other if the x-axis or y-axis forms a line of symmetry for the two points. Think about the signs of the integers in each quadrant.



Name _____ Date _____

Use this number line for questions 17 and 18 below.



17. What decimal represents the value of point B?

A -0.1

B -0.2

C -0.3

D -0.4

Hint

Notice that the number line is divided into 5 sections between each whole number. You name a number by its distance from 0. Since a decimal is a base ten number, each section of the number line has a distance of 0.2 from 0. Given that, what is the value of point B?

18. What fraction represents the value of point C?

F $\frac{4}{5}$

G $-\frac{4}{5}$

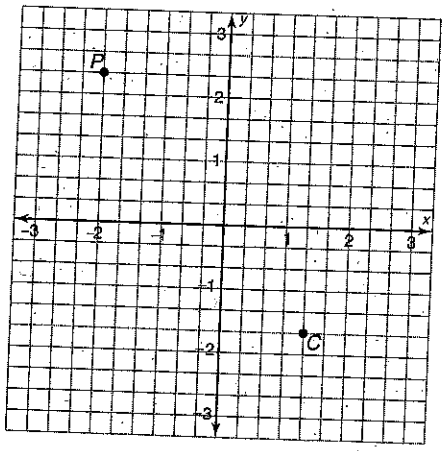
H $\frac{1}{5}$

J $-\frac{1}{5}$

Hint

The number line has 5 sections between each whole number. Since the question asks for a fraction, each section has a value of $\frac{1}{5}$. Given that, what is the value of point C?

Use this coordinate plane for questions 19 and 20 below.



19. What is the location of point C?

A $(1\frac{1}{3}, -1\frac{2}{3})$

B $(1\frac{2}{3}, -1\frac{1}{3})$

C $(-1\frac{1}{3}, 1\frac{2}{3})$

D $(-1\frac{2}{3}, 1\frac{1}{3})$

Hint

Remember when you plot ordered pairs, you always plot the x-coordinate first. Then you plot the y-coordinate. You read the location of the points the same way: x-coordinate first, then y-coordinate. Notice that the scale is set up for fractions and mixed numbers that include thirds.

20. What is the location of point P?

F $(2\frac{1}{3}, -2)$

G $(\frac{2}{3}, 2\frac{1}{3})$

H $(-2, -2\frac{1}{3})$

J $(-2, 2\frac{1}{3})$

Hint

The points on the scale of the coordinate plane allow for mixed numbers to be plotted. All the points on the scale are not labeled. Remember to read the x-coordinate first.

Name _____ Date _____

21. Which list shows these integers in order from least to greatest?

3, −7, 0, 4, −1

A 0, −1, 3, 4, −7

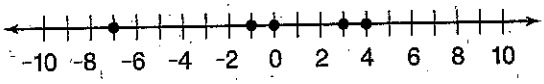
B −7, −1, 0, 3, 4

C 4, 3, 0, −1, −7

D 3, 4, 0, −1, −7

Hint

You can use a number line to help you compare.



On a number line, the numbers to the right of 0 are positive numbers. They become greater as you move to the right. The numbers to the left of 0 are negative numbers. They become lesser (smaller) as you move to the left.

22. The wind-chill temperatures on Tuesday for four cities are −8.2°F, −7.7°F, −5.8°F, and −6.2°F. Which list shows these numbers in order from greatest to least?

F −8.2°F, −7.7°F, −5.8°F, −6.2°F

G −5.8°F, −6.2°F, −7.7°F, −8.2°F

H −8.2°F, −7.7°F, −6.2°F, −5.8°F

J −6.2°F, −5.8°F, −7.7°F, −8.2°F

Hint

Remember that with negative numbers, the greater the number the lesser its value. So, −8.2 is less than −5.8.

23. A shipwreck was spotted at a depth of 275 ft. What is the shipwreck's actual distance from sea level?

A −275 ft

B |−275 ft|

C 2 × 75 ft

D Not Here

Hint

The absolute value is a measure of distance from 0. The distance between two points can never be negative, so absolute value is never a negative number.

$|275| = 275 \qquad |-275| = 275$

24. What symbol will make this inequality true?

$\frac{1}{4}$ ◯ $|-2.4|$

F >

G <

H =

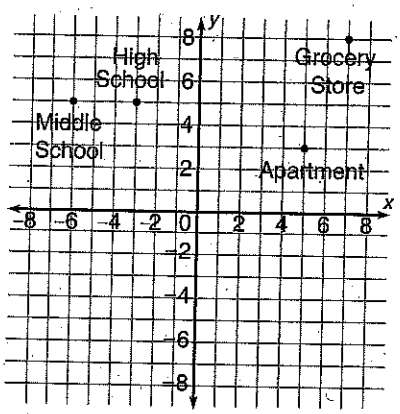
J +

Hint

When you see absolute value symbols, look at the face value of the number. In this case you are comparing $\frac{1}{4}$ and 2.4.

Name _____ Date _____

25. Zachary has graphed the location of the middle school at $(-6, 5)$. He has graphed the high school 3 units to the right of the middle school. What is the high school's ordered pair?



A $(-3, 5)$

B $(3, 5)$

C $(5, 3)$

D $(-3, -5)$

Hint

Find the point for the high school on the grid.

You read the location of a point the same way you plot a point.

Read the x-coordinate first and the y-coordinate second.