

NAME: \_\_\_\_\_ Period: \_\_\_\_\_

# Intermediate 1 END OF YEAR Review #1

1. Order the following integers from least to greatest.

-7, 3, -1, 0

-7, -1, 0, 3

2. What is the opposite of -2?

2

3-10 Simplify each expression.

3.  $|20| = \underline{20}$

4.  $|-8| = \underline{8}$

5.  $-|-5| = \underline{-5}$

6.  $-8 + 5 = \underline{-3}$

7.  $-8 + -5 = \underline{-13}$

8.  $-8 - (-5) = \underline{-3}$

9.  $-8 - 5 = \underline{-13}$

10.  $-45 \div -9 = \underline{5}$

11. Would the following product be positive or negative? Explain how you know.

$-46 \cdot -367 \cdot -4,532$  Negative because there are 3 negatives

12-13: Complete the statement using  $<$ ,  $=$ ,  $>$ .

12.  $-3 \cdot 5 \underline{<} |-8 - 7|$

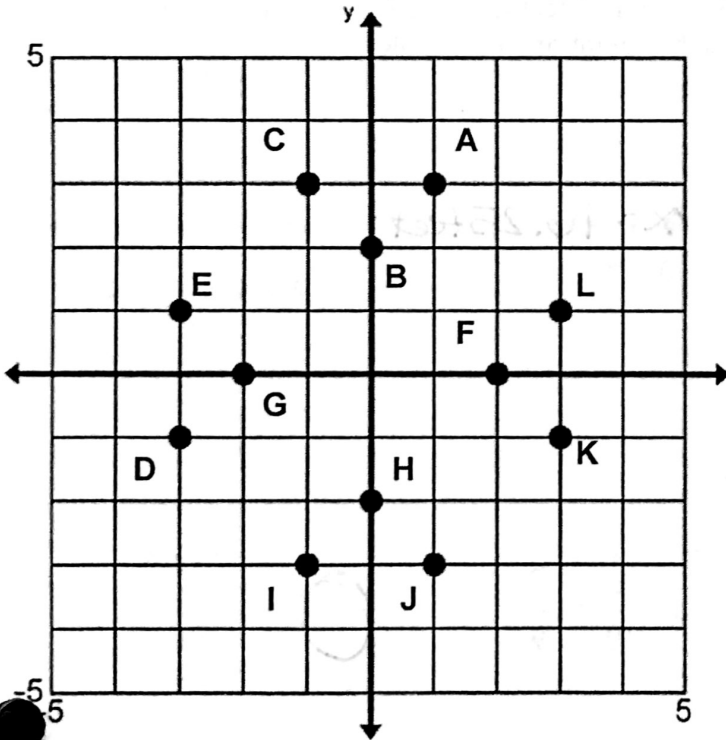
13.  $|6 + -11| \underline{>} -|6 + -11|$

14. Order the expressions from least to greatest using the letters.

A)  $|-10 + 7|$  B)  $-10 + 7$  C)  $|-10 - 7|$  D)  $-10 - 7$

D, B, A, C

15-18 Write the label of the point that has the following coordinates.



15.  $(1, -3) = \underline{J}$

16.  $(0, 2) = \underline{B}$

17.  $(-3, -1) = \underline{D}$

18.  $(-2, 0) = \underline{G}$

19-22 Write the ordered pair (coordinates) for each of the given points.

19. H = (0, -2)

20. C = (-1, 3)

21. F = (2, 0)

22. I = (-1, -3)

23. What quadrant is point D in? (I, II, III, or IV)

III

24. What axis is point F on?

X-axis

Find each percent of change. Also tell whether each is a percent increase or a percent decrease.

25. original: 8 cm wide  
new: 12 cm wide

50% increase

26. original: \$75  
new: \$60

20% decrease

27. original: 250  
new: 100

60% decrease

Use the order of operations to evaluate each expression. Show all your work.

28)  $32 - 9 \cdot 4 \div 2 + 8$

22

29)  $8 - 6(3 + 2 \cdot 6)$

-82

30)  $5 + 6(2 - 7)^2$

155

31)  $4^2 + 20 - 6$

30

32)  $(x + y)^3$   $x = 5$  and  $y = -14$

-729

33)  $x^2 - y^3$   $x = -2$  and  $y = -3$

31

Simplify the following fraction expressions. Don't forget to write each fraction in lowest terms. Show work. No Calculator.

34)  $\frac{3}{4} + 2\frac{1}{2}$

$\frac{13}{4}$  or  $3\frac{1}{4}$

35)  $5\frac{2}{5} - 3\frac{3}{10}$

$2\frac{1}{10}$

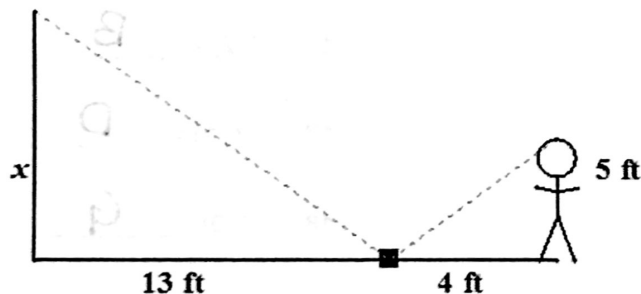
36)  $3\frac{2}{5} \cdot 1\frac{3}{10}$

$\frac{221}{50}$  or  $4\frac{21}{50}$

37)  $8\frac{2}{5} \div 4\frac{1}{5}$

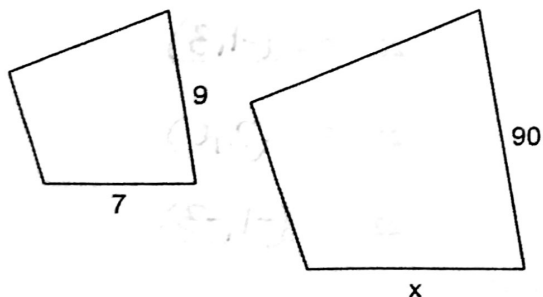
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38) Mary is standing next to the flag pole outside the school. She uses a mirror to help her calculate the height of the flag pole. Mary is 5 feet tall and she is standing 4 feet from the mirror. The mirror was placed 13 feet from the base of the flagpole. What is the height of the flagpole?



$x = 16.25$  feet

39) Circle the proportion that is set up INCORRECTLY.



A.  $\frac{x}{90} = \frac{7}{9}$

B.  $\frac{x}{9} = \frac{7}{90}$

C.  $\frac{9}{7} = \frac{90}{x}$

D.  $\frac{7}{x} = \frac{9}{90}$

Solve the following equations for the missing variable.

40.  $x + 4 = 6$

$x = 2$

41.  $32.02 = 6.2x - 5.8$

$x = 6.1$

42.  $28x = 4$

$x = 7$

43.  $3(2x + 5) = -33$

$x = -8$

44.  $\frac{5}{7}x = 15$

$x = 21$

45.  $6.4 + 5.5x = 30.6$

$x = 4.4$

46.  $48 = 4(-4x + 4)$

$x = -2$

47.  $x - 7 = 2$

$x = 9$

48.  $\frac{x}{4} = 9$

$x = 36$

49.  $-46 = -1(6x - 8)$

$x = 9$

50.  $3.4x = 20.74$

$x = 6.1$

51.  $-8.1 = -x$

$x = 8.1$

Solve the following equations for the missing variable.

52.  $-\frac{1}{2}x = -16$

$x = 32$

53.  $6(3x - 4) = -18$

$x = \frac{1}{3}$

54.  $4x + 4 = 16$

$x = 3$

55.  $8 = -6 + x$

$x = 14$

56.  $-10x - 1 = -6$

$x = \frac{1}{2}$

57.  $4 + 6x = -2$

$x = -1$

58.  $-1(4x - 2) = 1$

$x = \frac{1}{4}$

59.  $\frac{3}{5}x - \frac{3}{4} = \frac{3}{10}$

$x = \frac{7}{4}$  or  $1\frac{3}{4}$

60.  $\frac{x}{-4} = -2$

$x = 8$

Solve the following equations for the missing variable.

61.  $-1 = -3x - 7$

$x = -2$

62.  $x - \frac{1}{3} = \frac{4}{3}$

$x = \frac{5}{3}$  or  $1\frac{2}{3}$

63.  $x - 1 = -3$

$x = -2$

Simplify.

64.  $5p - 7 + 4p$

$9p - 7$

65.  $2(10x - 3) - 4x$

$16x - 6$

66.  $10m + 6 + 10$

$10m + 16$

67.  $-4(x + 5)$

$-4x - 20$

68.  $x - 5 + 2x - 4$

$3x - 9$

69.  $-2(-7n + 11)$

$14n - 22$

70.  $-9k - 4 - 7k$

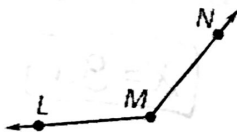
$-16k - 4$

71.  $(a - 5)(10)$

$10a - 50$

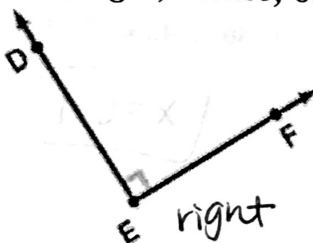
State whether the angle appears to be acute, right, obtuse, or straight.

72.



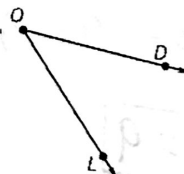
obtuse

73.



right

74.



acute

Solve the following percent problems. Remember to label percents if necessary.

75. Find 30% of 10.

3

77. 7.5 is 80% of what?

9.375

79. What percent of 10 is 3?

30%

76. 3 is what percent of 3?

100%

78. 2 is 125% of what number?

1.6

80. What is 10% of 4?

.4