

For help with these problems

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Math_Questions_0014

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1. a) Evaluate $\frac{3x}{8y}$ for $x = 2$ and $y = -9$

ANS:

b) Write an algebraic expression:

The total of six times a number and seven.

ANS:

2. Use either $<$ or $>$ for \square to write a true sentence.

a) $0 \square -8$

ANS:

b) $-5 \square -2$

ANS:

c) $-0.221 \square -0.212$

ANS:

d) $-\frac{2}{3} \square -\frac{2}{9}$

ANS:

3. Find the reciprocal of each number:

a) -6

ANS:

b) $\frac{2}{3}$

ANS:

c) $-\frac{2}{5}$

ANS:

d) 0.25

ANS:

Compute and simplify. Do not use a calculator.

4. a) $3.1 - 10.09$

ANS:

b) $\frac{3}{8} - \left(-\frac{1}{4}\right)$

ANS:

5. a) $-4.213 \div (-0.2)$

ANS:

b) $-3(4) - |2(-4) - 3^3|$

ANS:

Simplify:

6. a) $4 + 3 - 6 - (-10)$

ANS:

b) $5x - (4x - 5) - 3$

ANS:

7. a) Find the prime factorization of 630.

ANS:

b) Find the LCM of 4, 14, and 15.

ANS:

8. a) Simplify: $|-48 - 2(6)| - |-64| + |5|$

ANS:

b) Simplify: $a - \{3a - [4a - (7a - 10a)]\}$

ANS:

For problems 9 - 12, solve each of the equation.

9. a) $5x = -35$

ANS:

b) $-\frac{3}{4}x = 27$

ANS:

10. a) $11 - y = 3$

ANS:

b) $-\frac{3}{5} + x = -\frac{7}{8}$

ANS:

11. a) $6(x + 5) = 54$

ANS:

b) $-3x - 2(x + 5) = 7$

ANS:

12. $8(x + 2) - 5x = 3x + 1$

ANS:

b) $12y + 2 = 15y - 3 - 3y + 5$

ANS:

For problems 13 - 14, solve each of the inequalities. Write set notation for the answers.

Example: Solve: $x + 4 \leq 2$
ANS: $\{x \mid x \leq -2\}$

13. a) $8x \geq 48$

ANS:

b) $-9y \leq 27$

ANS:

14. a) $-4y \leq 32$

ANS:

b) $-8x \geq \frac{1}{2} + 1$

ANS:

15. Graph the solution to each inequality on a number line.

a) $-3 \leq x \leq 3$

b) $6x - 2 > x + 13$

$5x > 15$

$x > 3$

Solve each of the problems.

16. a) 80% of what number is 12?

ANS:

b) What percent of 185 is 111?

ANS:

17. Pat left a 15% tip of a meal. The total cost of the meal, including the tip, was \$27.60. What was the cost of the meal before the tip was added?

ANS:

18. a) Solve: $m = \frac{2}{y-x}$ for x

b) Solve $6|x| - 5 = 4$

ANS:

ANS:

19. In which quadrant is the point located?

a) (5, 0)

b) (-10, 14)

c) (3, 0)

d) (3, -4)

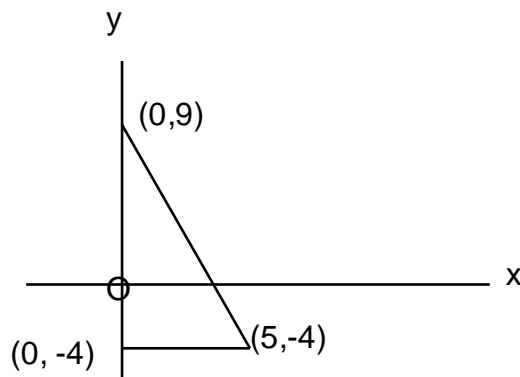
ANS:

ANS:

ANS:

ANS:

20. Find the area of the triangle with the vertices (0, 9), (0, -4), and (5, -4) as shown below.



Solution:

21. Complete the table of:

a) $y = -2x$

b) $5y - 3x = -10$

x	y	(x, y)
-1		
0		

x	y	(x, y)
0		
1		

22. The equation $3x + 4y = 8$ and $y = -\frac{3}{4}x + 2$ are equivalent. Which equation is easier to graph and why?

ANS:

23. Complete the ordered pairs, so that each ordered pair satisfies the given equation.

$$x - y + 5 = 0$$

a) (0,)

b) (, 4)

c) (-2,)

d) (-5,)

24. The graph of the equation $Ax + By = C$ is a vertical line, what can you conclude about B ? Why?

ANS:

25. Find the equation of the line that goes through $(6, 5)$ and has slope $\frac{2}{3}$.

Solution: