1. Solve the equation $3y - 9 = -2y + 4$. The solution set is:

   A) $\{-5\}$ B) $\left\{\frac{5}{13}\right\}$ C) $\left\{\frac{13}{5}\right\}$ D) $\{13\}$ E) $\{5\}$

2. Evaluate: $|4 - 7|$

   A) -11 B) -3 C) 7 D) 11 E) 3

3. If $a = -1$ and $b = -2$, find the value of $2a^3b^2$.

   A) -8 B) -3 C) 2 D) 8 E) 3

4. How many integers appear on the following list of numbers?

   $$4,\ -2,\ 2,\ \frac{4}{3},\ 15,\ \sqrt{2},\ 0,\ 3,\ -9.6,\ -8$$

   A) 4 B) 5 C) 6 D) 7 E) 8

5. Solve the equation $4 - x = 3(x - 7)$. The solution set is:

   A) $\left\{-\frac{17}{2}\right\}$ B) $\left\{\frac{25}{4}\right\}$ C) $\left\{\frac{17}{4}\right\}$ D) $\left\{-\frac{25}{2}\right\}$ E) $\left\{\frac{4}{25}\right\}$

6. Evaluate: $\dfrac{(-4)(-3)(5)}{-1+5}$

   A) -15 B) 11 C) -12 D) 15 E) -7

7. Solve the equation $\dfrac{a-10}{5} = -3$. The solution set is:

   A) $\{-5\}$ B) $\{-1\}$ C) $\{1\}$ D) $\{5\}$ E) $\{-25\}$

8. What is the y-intercept of the line with equation $3x + 2y = 30$?

   A) -10 B) 10 C) 15 D) -15 E) 6

9. A certain triangle's longest side is one centimeter less than six times the shortest side. The other side is five times the shortest side. The perimeter is thirty-five centimeters. Find the length of the longest side.

   A) 3 centimeters
   B) 11 centimeters
   C) 17 centimeters
   D) 35 centimeters
   E) 7 centimeters

10. Solve the inequality $2x + 3 \leq 4x + 9$. The solution set is:

    A) $[1, \infty)$ B) $(-\infty, -3]$ C) $[-3, \infty)$ D) $[-1, \infty)$ E) $(-\infty, 1]$

11. Simplify: $\frac{3}{4} \cdot 6 - 5 \cdot \frac{5}{2}$

A) $-\frac{7}{4}$ B) $\frac{15}{8}$ C) 4 D) $\frac{7}{2}$ E) -8

12. Solve the equation $\frac{3t}{4} - 10 = -4$. The solution set is:

A) $\{12\}$ B) $\{8\}$ C) $\{-2\}$ D) $\{2\}$ E) $\{-1\}$

13. Solve the inequality $3w - 5 < 5(w - 2)$. The solution set is:

A) $(1, \infty)$ B) $\left(-\infty, -\frac{3}{2}\right)$ C) $\left(-\infty, \frac{3}{2}\right)$ D) $\left(\frac{15}{8}, \infty\right)$ E) $\left(\frac{5}{2}, \infty\right)$

14. Solve the equation $3x - 5\,(x - 1) = -1 - 2\,(x - 3)$. The solution set is:

A) $\varnothing$
B) $\{x \mid x \text{ is a real number}\}$
C) $\{0\}$
D) $\{-6\}$
E) $\{-6, 0\}$

15. Find the x-intercept of the line given by $5x - y = -10$.

A) -10 B) 10 C) 2 D) -2 E) $\frac{5}{2}$

16. A rectangle has a width which is seven inches less than its length. The perimeter is 46 inches. Find the area of the rectangle.

A) 690 square inches
B) 529 square inches
C) 120 square inches
D) 30 square inches
E) 180 square inches

17. A coat is on a special sale at a 20% discount. If the sale price is \$96, what was the price of the coat before the discount?

A) \$102 B) \$115.20 C) \$120 D) \$110 E) \$76.80

Other non-multiple choice questions for review

18. In this list of numbers, 12, -3.7, $\sqrt{3}$, π, 0, 17, -5, how many of these numbers are:
    i) Natural Numbers
    ii) Whole Numbers
    iii) Integers
    iv) Rational Numbers
    v) Irrational Numbers
    vi) Real Numbers

19. Evaluate the following.
    i) $\frac{5}{6} - \frac{5}{4}$
    ii) $\frac{2}{3} \cdot \frac{5}{8}$
    iii) $\frac{4^2}{5} - 3^2$
    iv) $\frac{5-3}{(-2)(-4)(-6)}$
    v) $9 - |-3|$
    vi) $x - y^2 z$, where $x = -6$, $y = -3$, and $z = 2$

20. Solve:
    i) $2x - 5 = 17$
    ii) $7(j-5) + 8 = 2(j+5) + 5j$
    iii) $\frac{t-5}{12} = 4$

21. Graph the following lines:
    (a) $4x - 5y = 10$
    (b) $y = 8 - \frac{x}{2}$
    (c) $x + y = 12$
    (d) $y = 3$
    (e) $x = -2$

22. Mary bought four less than three times the number of books that Jose did. Together they bought sixteen books. How many did Jose buy?

Answers

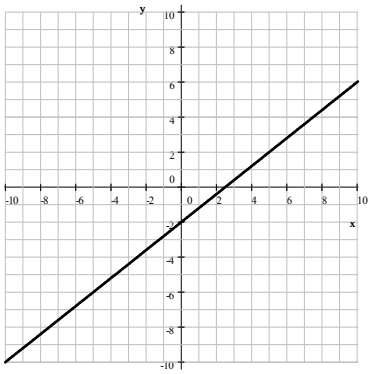
1.	C	6.	D	11.	E	16.	C
2.	E	7.	A	12.	B	17.	C
3.	A	8.	C	13.	E		
4.	D	9.	C	14.	B		
5.	B	10.	C	15.	D		

18. i) 2 ii) 3 iii) 4 iv) 5 v) 2 vi) 7

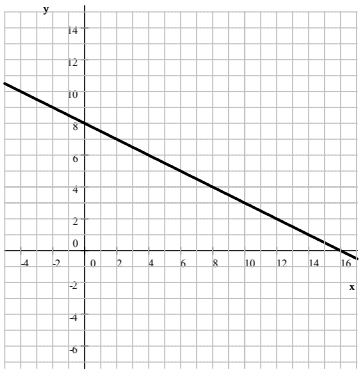
19. i) $-\frac{5}{12}$ ii) $\frac{5}{12}$ iii) $-\frac{29}{5}$ iv) $-\frac{1}{24}$ v) 6 vi) -24

20. i) $\{11\}$ ii) $\varnothing$ iii) $\{53\}$

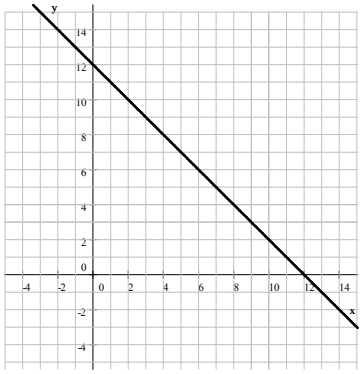
21. a) $4x - 5y = 10$



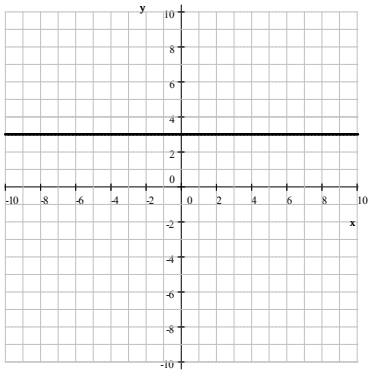
b) $y = 8 - \frac{x}{2}$



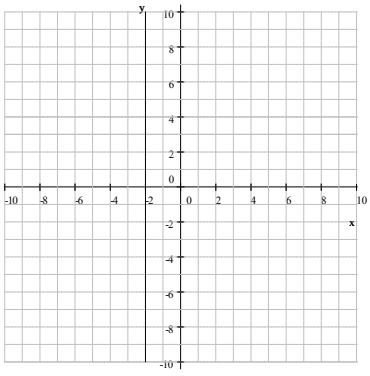
c) $x + y = 12$



d) $y = 3$



e) $x = -2$



22. 5 books

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