

Answers for the practice final for Math 03

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1. Evaluate: $-5 - 6(2 - 3) + 7$
Answer. 8 □
2. Evaluate: $-2x + 3y$ if $x = -2$ and $y = 7$.
Answer. 25 □
3. Simplify: $5x(4x - 3) - (5x - 2) + x^2$.
Answer. $21x^2 - 20x + 2$. □
4. Simplify: $(x^2y^3)^2(xy)^3$.
Answer. x^7y^9 □
5. Multiply: $(2x - 3)(5x + 4)$.
Answer. $10x^2 - 7x - 12$ □
6. Multiply: $(x^2 + 2x + 4)(x - 2)$.
Answer. $x^3 - 8$ □
7. Divide: $\frac{4x^3 - 6x^2 - 8x}{2x}$.
Answer. $2x^2 - 3x - 4$ □
8. Divide: $\frac{-10a^3b^2c^4}{2ab^3c^3}$.
Answer. $\frac{-5a^2c}{b}$ □
9. Solve: $5x - 3 = 17$.
Answer. $x = 4$ □
10. Solve: $2(x - 1) + 15x = 17 - 2x$.
Answer. $x = 1$ □

11. Solve: $\frac{5x}{3} = \frac{x+7}{2}$.
Answer. $x = 3$
12. Factor completely: $9x^2 - 25$
Answer. $(3x+5)(3x-5)$
13. Factor completely: $(x+2)(x-3)$.
Answer. $x^2 - x - 6$
14. Factor completely: $x^3 - x$.
Answer. $x(x+1)(x-1)$
15. Find the slope of the line that contains the points (1, 2) and (3, 10).
Answer. 4.
16. Solve the system: $\begin{cases} x - 3y = 7 \\ 5x + 2y = 1 \end{cases}$
Answer. $x = 1, y = -2$.
17. A jar contains \$3.00 in quarters and nickels. If the total number of coins is 20, how many of each kind are there in the jar?
Answer. There are 10 nickels and 10 quarter.
18. The sum of two numbers is 65. One number is five more than twice the other. Find the numbers.
Answer. The two numbers are 45 and 20.
19. Graph each of the following two lines in the space provided. Find the x and the y intercepts for each line.
- (a) $y = 2x - 1$
Answer. The x -intercept is $\left(\frac{1}{2}, 0\right)$ and the y -intercept is $(0, -1)$.
- (b) $3x + 2y = 6$
Answer. The x -intercept is $(2, 0)$ and the y -intercept is $(0, 3)$.
20. (a) Simplify: $\sqrt{100}$
Answer. 10.
- (b) Simplify: $\sqrt{50}$.
Answer. $5\sqrt{2}$.

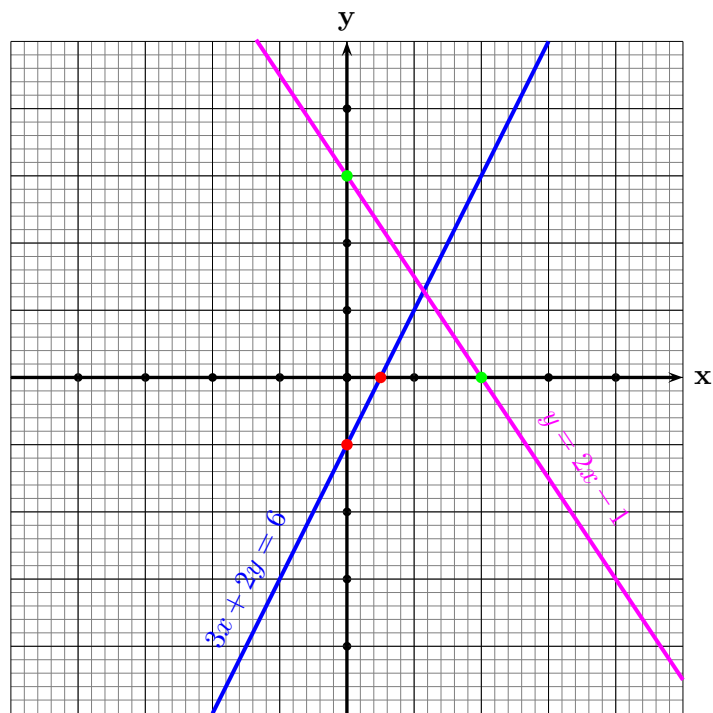


Figure 1: The graph for Question 19