

math 009 online practice exam 3

1. On a set of axes, mark the positions of the following coordinates: (3,2), (-2,8), (-6,-1), (0,3)
2. Draw the graph of the relation $y = 2 - 3x$
3. On the same set of axes, draw the graph of the relation $3y - 6x = 9$.
4. Find the slope and y-intercept of the graph of the relation $y = 3x - 6$.
5. Find the equation of the straight line which passes through the points (5, 11) and (7, 1).
6. Find the point at which the graphs of the equations $y = 3x - 5$ and $y = x + 1$ intersect.
7. If $4x + y = 27$, find x if $3y + 7 = -2$
8. Solve:
$$\begin{array}{l} x + 3y = 13 \\ 3x + 2y = 4 \end{array}$$
9. Solve the system of equations:
$$\begin{array}{l} 7x + 3y = 36 \\ 5x + 2y = 25 \end{array}$$
10. An automatic vending machine in the post office provides a packet of 27 10-cent and 20-cent stamps worth \$3.00. If the stamps are priced at their face value, how many of each type of stamp are there?
11. Reduce: $\frac{4x^3 - 36x}{x^2 + 6x + 9}$
12. Multiply: $\frac{x^2 - 1}{x^2 - 8x - 20} \cdot \frac{x^2 + 4x + 4}{x^2 + 3x + 2}$
13. Add: $\frac{x + 5}{7x + 10} + \frac{3x + 5}{7x + 10}$
14. Subtract: $\frac{3}{x - 4} - \frac{5}{x + 2}$
15. Subtract: $(3x^5 - 3x^4 + 7x^2 - 4) - (-9x^4 - 5x^3 + 8x^2)$
16. Multiply: $(7x^3 + 2x - 5)(5x^2 - 7)$
17. Factor: $x^2 - 3x - 28$

18. Factor: $18x^2 + 33x + 9$

19. Solve: $(4x - 7)(2x + 3) = 0$

20. Solve: $6x^2 + 11x + 3 = 0$