

- Simplify each of the following expressions.
 - $(-3ab)^2(-2a^2b)^3 =$
 - $-2x^3y^2(-2x^3y)^2 =$
 - $x(3-2x) - (2x-1)^2 =$
- Find $\frac{3}{7}$ of 42.
- Which fraction is larger, $\frac{5}{8}$ or $\frac{7}{12}$? Hint: compare $\frac{5}{8}$ of 120 and $\frac{7}{12}$ of 120.
- Completely factor each of the following expressions.
 - $3a^6b - 243a^2b =$
 - $40ax^2 + 10ax^3 - 5ax^4 =$
- Solve the following equations. Make sure to check your solutions.
 - $x^3 = 12x^2 + 3213x$
 - $3|x+3| - 5 = 10$
 - $x^3 - 2x^2 - 35x = 0$
 - $2x^2 - 32x = 0$
- Graph the straight lines determined by the equations $3x + y = 0$ and $x + y = 4$.
 - Use your graph to find the coordinates of the point where the lines intersect.
 - Use algebraic methods to check your answer.
- Graph the straight lines $y = 2x - 3$ and $y = -(2x - 3)$ in the same coordinate system
- Graph the parabola $y = 2x + x^2 - 3$. Clearly label the coordinates of five points, including vertex and intercepts.
- The sum of two numbers is 27. Their difference is 11. Find these numbers.
- The product of two numbers is 209. Their difference is 8. Find these numbers.
- One side of a rectangle is 3 ft shorter than twice the other side. Find the sides if the perimeter is 36 ft.