

4. Simplify the expression completely $7^{-1/2} \cdot 7z^{3/2} (7z)^{-5/2}$, or if it cannot be simplified any further, write "simplified."

5. Factor the polynomial completely $x^3 + 3x^2 + 2x$.

6. Factor the polynomial completely $6x^2 - 5x - 6$.

7. Perform the given operation and simplify the expression: $(3x - 2)(5x + 1)$.

8. Perform the given operation and simplify the expression: $\frac{3x}{x^2 - x - 2} - \frac{2x}{x^2 + x - 6}$.

9. Solve the equation, then check your answer(s): $5x + 72 = 89 - x$.

10. Solve the equation, then check your answer(s): $\frac{y}{3} + 4 = \frac{y}{2}$.

11. Solve the equation, then check your answer(s): $\sqrt{x} = 2 - x$.

12. Solve the equation, then check your answer(s): $(x + 2)^2 = 4$.