1. Simplify \( \left( \frac{(-2y)^3 y^{-2}(5y^2)^{-3}}{y^{3/2}(5y^2)^{-3}} \right)^{-1/2} \) where \( y > 0 \).

2. Rationalize the denominator of \( \frac{\sqrt{3} + \sqrt{2}}{2\sqrt{3} - 3\sqrt{2}} \) and write the result in the simplest form.
3. Find the value of \( \frac{-3^2 + 6 \cdot \sqrt{(-3)^2 + 2}}{2 - \sqrt[3]{(-3)^3}} + \sqrt[3]{0.00032} \).

4. Find the coefficient of \( a^2 b^3 \) in the product \((a - b)^2 (3a - b)^3\). 

5. Let \( P(x) = 3x^4 - 6x^2 + 2x^5 + 7x^3 - x + 10 \). Then only one of the following is TRUE:
   
   (a) \( P(x) + \frac{1}{x} \) is a polynomial.
   (b) The degree of \( P(x) \) is 6.
   (c) There are 5 terms in \( P(x) \).
   (d) \( P(x) \) is in the standard form.
   (e) The leading coefficient of \( P(x) \) is equal to 2.