

Free Response Questions

11. Write $\sqrt[3]{x} \cdot \sqrt{x}$ as a single term with a rational exponent.

12. Explain how $(8^{\frac{1}{9}})$ can be written as the equivalent radical expression $\sqrt[3]{2}$

13. Algebraically determine the values of h and k to correctly complete the identity stated below.

$$2x^3 - 10x^2 + 11x - 7 = (x - 4)(2x^2 + hx + 3) + k$$

14. Given the exponential function $f(x) = 17e^{(0.15x)}$.

(a) Write down $f(0)$.

(b) Find $f(2)$.

(c) Solve for x such that $f(x) = 25$.

15. Express $(1 - i)^3$ in $a + bi$ form.