

Chapter 5 Practice Test**Simplify the expression.**

1. $(a^2b^2)^5$
2. $(-2a^2b^3c^4)^4$
3. Use synthetic substitution to evaluate $f(s) = 6s^3 - 6s^2 - 2s + 2$ when $s = 2$.

Find the sum or difference.

4. $(8h^3 - 8h + 8) - (7h^3 + 7h + 1)$
5. $(9a^5 - 9a^4 + 1) + (6a^5 - 6a + 7)$

Find the product.

6. $(k - 3)(k^2 + k + 2)$

Factor the polynomial completely.

7. $2b^3 - 4b^2 + 10b$

Find the real-number solutions of the equation.

8. $v^3 - 2v^2 = 0$

Given polynomial $f(x)$ and a factor of $f(x)$, factor $f(x)$ completely.

9. $f(x) = x^3 + 4x^2 + x - 6$ given that $(x + 2)$ is a factor.

10. $f(x) = 2x^3 - 15x^2 + 34x - 21$ given that $(x - 1)$ is a factor.

Given polynomial function f and a zero of f , find the other zeros.

11. $f(x) = x^3 + 8x^2 + 5x - 14$ given that -2 is one of the zeros.

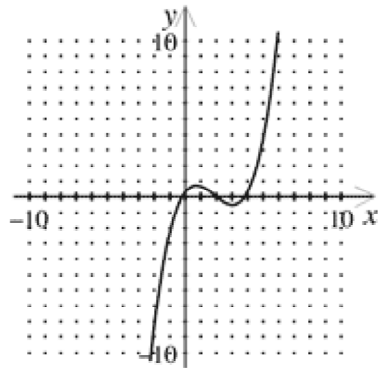
List the possible rational zeros of the function using the rational zeros theorem.

12. $f(x) = 2x^3 + 3x^2 - 11x - 6$

Find all real zeros of the function.

13. $p(x) = 2x^3 + 20x^2 + 62x + 60$

____ 14. Use the graph to approximate the real zeros of the function. Round to the nearest integer.



a. 0, 2, 4

b. $-4, -2, 0$

c. $2, -4, -2, 0$

d. 2