

Math 3 Advanced

6.5 Practice Part 3 with KEY

Simplify a polynomial expression using synthetic division.

1. $(3x^3 - 2x^2 + 1) \div (x - 2)$

2. $(x^3 + 2x + 3) \div (x - 2)$

3. $(x^3 - 2x - 18) \div (x - 3)$

4. $(3x^3 - 8x + 1) \div (x + 2)$

5. $(5x^3 - 2x^2 + 3x - 4) \div (x - 3)$

6. $(3x^3 - x^2 + 2x - 1) \div (x - 3)$

7. $(3x^3 + x^2 - 6x + 5) \div (x + 2)$

8. $(5x^3 - 11x^2 - 14x - 10) \div (x - 3)$

9. $(x^3 - 30x) \div (x + 5)$

10. $(2x^3 - 8x) \div (x + 1)$

Answer List

1. $3x^2 + 4x + 8, R = 17$

3. $x^2 + 3x + 7, R = 3$

5. $5x^2 + 13x + 42, R = 122$

7. $3x^2 - 5x + 4, R = -3$

9. $x^2 - 5x - 5, R = 25$

2. $x^2 + 2x + 6, R = 15$

4. $3x^2 - 6x + 4, R = -7$

6. $3x^2 + 8x + 26, R = 77$

8. $5x^2 + 4x - 2, R = -16$

10. $2x^2 - 2x - 6, R = 6$