

Assignment: Partial Fraction

Find the partial fraction decomposition of each.

1) $\frac{-8x + 19}{(x - 2)(x - 3)}$

2) $\frac{-11x - 5}{(x - 4)(x + 3)}$

3) $\frac{x^4 + 3x^2 - 9}{x^4 + 8x^2 + 16}$

4) $\frac{7x^2 + 21 + 5x}{x^3 + 3x}$

5) $\frac{4x^2 - 8 - x}{x^3 - 2x}$

6) $\frac{x^2 - 1}{x^4 - 4x^2 + 4}$

7) $\frac{-2x^3 + 11x - 7x^2 + 21}{x^3 - 2x + x^2 - 2}$

8) $\frac{20x + 1}{25x^2 - 10x + 1}$

9) $\frac{x^4 - 13}{x^4 + 6x^2 + 9}$

10) $\frac{-2x^4 + 17x^2 - 34}{x^4 - 10x^2 + 25}$

Answers to Assignment: Partial Fraction

$$1) -\frac{3}{x-2} - \frac{5}{x-3}$$

$$4) \frac{7}{x} + \frac{5}{x^2+3}$$

$$8) \frac{4}{5x-1} + \frac{5}{(5x-1)^2}$$

$$2) -\frac{7}{x-4} - \frac{4}{x+3}$$

$$5) \frac{4}{x} - \frac{1}{x^2-2}$$

$$9) 1 - \frac{6}{x^2+3} - \frac{4}{(x^2+3)^2}$$

$$3) 1 - \frac{5}{x^2+4} - \frac{5}{(x^2+4)^2}$$

$$6) \frac{1}{x^2-2} + \frac{1}{(x^2-2)^2} \quad 7) -2 - \frac{5}{x+1} + \frac{7}{x^2-2}$$

$$10) -2 - \frac{3}{x^2-5} + \frac{1}{(x^2-5)^2}$$