

Dividing Polynomials

Divide by long division method.

1) $(42s^6 - 35s^5 - 9s^4 + 26s^3 + 4s^2 + 9) \div (3s^3 + 2s^2 + 5)$

2) $(8r^5 + 11r^4 + 10r^3 + 5r^2 + 3) \div (r^2 + 5)$

3) $(45v^4 + 18v^3 + 12v^2 + 9v + 6) \div (3v^2 + 2v + 1)$

4) $(x^3 - 13x^2 + 40x - 24) \div (x - 4)$

5) $(2p^2 + 7p - 15) \div (p - 3)$

6) $(50k^3 + 10k^2 - 35k - 7) \div (5k^2 - 4k + 6)$

7) $(10c^5 + 11c^4 + 8c^2 - 2c + 9) \div (2c^4 - 3c^3 + 8c^2 - c + 3)$

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Dividing Polynomials

Divide by long division method.

1) $(42s^6 - 35s^5 - 9s^4 + 26s^3 + 4s^2 + 9) \div (3s^3 + 2s^2 + 5)$

$$14s^3 - 21s^2 + 11s - 22 + \frac{153s^2 - 55s + 119}{3s^3 + 2s^2 + 5}$$

2) $(8r^5 + 11r^4 + 10r^3 + 5r^2 + 3) \div (r^2 + 5)$

$$8r^3 + 11r^2 - 30r + 3$$

3) $(45v^4 + 18v^3 + 9v^2 + 9v + 5) \div (5v^3 + 2v^2 + 5)$

$$9v + \frac{-5v^2 - 5}{5v^3 + 2v^2 + 5}$$

4) $(x^3 - 13x^2 + 13x - 6) \div (x^2 - 7x + 10)$

$$x - 6 + \frac{-16x + 10}{x^2 - 7x + 10}$$

5) $(2p^2 + 7p - 10) \div (p - 7)$

$$p + 7 + \frac{10}{p - 7}$$

6) $(50k^3 + 10k^2 - 35k - 7) \div (5k^2 - 4k + 6)$

$$10k + 10 + \frac{-55k - 67}{5k^2 - 4k + 6}$$

7) $(10c^5 + 11c^4 + 8c^2 - 2c + 9) \div (2c^4 - 3c^3 + 8c^2 - c + 3)$

$$5c + 13 + \frac{-c^3 - 91c^2 - 4c - 30}{2c^4 - 3c^3 + 8c^2 - c + 3}$$

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