

Dividing Polynomials

Divide by long division method.

1) $(3r^6 + 2r^5 + 3r^4 - r^3 + 2r^2 + 2r + 3) \div (r^3 + 2r^2 - 2r + 1)$

2) $(10z^4 + 3z^3 + 5z^2 - 8z - 5) \div (z^3 + 5z^2 + 3z + 4)$

3) $(7g^3 + 14g^2$

4) $(9c^5 - c^4 + 6$

5) $(12a^2 + 3a$

6) $(4y^4 - 8y^3 + 7y^2 + 5y - 2) \div (y^2 + 5y - 8)$

7) $(k^3 - 4k^2 - 30k - 18) \div (k + 3)$

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Dividing Polynomials

Divide by long division method.

1) $(3r^6 + 2r^5 + 3r^4 - r^3 + 2r^2 + 2r + 3) \div (r^3 + 2r^2 - 2r + 1)$

$$3r^3 - 4r^2 + 17r - 46 + \frac{132r^2 - 107r + 49}{r^3 + 2r^2 - 2r + 1}$$

2) $(10z^4 + 3z^3 + 5z^2 - 8z - 5) \div (z^3 + 5z^2 + 3z + 4)$

$$10z - 47 + \frac{21}{z^3}$$

3) $(7g^3 + 14g^2 + 7g + 2) \div (g^2 + 2g + 1)$

$$7g + \frac{2}{g^2 + 2g + 1}$$

4) $(9c^5 - c^4 + 6c^3 + 9c^2 + 8c - 22) \div (c^2 + 2c + 1)$

$$9c^3 + 8c - 22 + \frac{2}{c^2 + 2c + 1}$$

5) $(12a^2 + 3a - 7) \div (3a + 2)$

$$4a - 7 + \frac{52}{3a + 2}$$

6) $(4y^4 - 8y^3 + 7y^2 + 5y - 2) \div (y^2 + 5y - 8)$

$$4y^2 - 28y + 179 + \frac{-1114y + 1430}{y^2 + 5y - 8}$$

7) $(k^3 - 4k^2 - 30k - 18) \div (k + 3)$

$$k^2 - 7k - 9 + \frac{9}{k + 3}$$

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