Long Division Method

Divide the polynomials by long division method.

1) $(p^4 - 3p^3 - 25p^2 + 51p - 8) \div (p^2 - 6p + 1)$

2) $(4x^5 + 24x^3 - 12x^2 + 35x - 42) \div (2x^3 + 5x - 6)$

3) $(21w^3 - 10w^2 - 21w - 4) \div (3w - 4)$

4) $(2d^5 - 13d^4 + 13d^3 + 22d^2 - 51d - 45) \div (d^2 - 4d - 5)$

5) $(24h^4 - 6h^3 - 8h^2 + 5h - 10) \div (6h^2 - 5)$

6) $(14k^2 + 57k - 27) \div (2k + 9)$

Long Division Method

Answer key

Divide the polynomials by long division method.

1) $(p^4 - 3p^3 - 25p^2 + 51p - 8) \div (p^2 - 6p + 1)$

   $p^2 + 3p - 8$

2) $(4x^5 + 24x^3 - 12x^2 + 35x - 42) \div (2x^3 + 5x - 6)$

   $2x^2 + 7$

3) $(21w^3 - 10w^2 - 21w - 4) \div (3w - 4)$

   $7w^2 + 6w + 1$

4) $(2d^5 - 13d^4 + 13d^3 + 22d^2 - 51d - 45) \div (d^2 - 4d - 5)$

   $2d^3 - 5d^2 + 3d + 9$

5) $(24h^4 - 6h^3 - 8h^2 + 5h - 10) \div (6h^2 - 5)$

   $4h^2 - h + 2$

6) $(14k^2 + 57k - 27) \div (2k + 9)$

   $7k - 3$