2 Pure Mathematics 2 – Part 1 —Answers

Answers

2.1 (a) 8; (b) $|-9| = 9$.

2.2 $x = 4$ or $x = -4$.

2.3 $p(1) = 1 + 2 - 1 - 2 = 0$, so $(x - 1)$ **is** a factor.

2.4 Remainder $= p(2) = 4 + 6 + 5 = 15$.

2.5 Degree 5 (the highest power is x^5).

2.6 By the factor theorem, test $a = -2$: $p(-2) = (-2)^3 + 3(-2)^2 - 4(-2) - 12 = -8 + 12 + 8 - 12 = 0$. Since $p(-2) = 0$, $(x + 2)$ is a factor, so $x = -2$ is a value for which $p(x) = 0$.