

1 Evaluate these expressions using the given values. (Show at least one intermediate step for each.)

a  $(a - 2b)^2$  when  $a = 1$  and  $b = -2$

When  $a = 1$  and  $b = -2$ ,

$$(a - 2b)^2 = ((1) - 2(-2))^2 = (1 - (-4))^2 = (5)^2 = 25.$$

b  $2x^2 - x + 3$  when  $x = -2$

When  $x = -2$ ,

$$2x^2 - x + 3 = 2(-2)^2 - (-2) + 3 = 2(4) - (-2) + 3 = 8 - (-2) + 3 = 13.$$

2 A rectangle has a length of 12.5 metres and a width of 5.6 metres. What are its perimeter and area? (Show at least one intermediate step for each, and be sure to use the correct units.) You may use these formulas for perimeter ( $P$ ) and area ( $A$ ) in terms of length ( $l$ ) and width ( $w$ ):

- $P = 2l + 2w$ ,
- $A = lw$ .

The perimeter is

$$P = 2l + 2w = 2(12.5 \text{ m}) + 2(5.6) \text{ m} = 25 \text{ m} + 11.2 \text{ m} = 36.2 \text{ m};$$

the area is

$$A = lw = (12.5 \text{ m})(5.6 \text{ m}) = 70 \text{ m}^2.$$