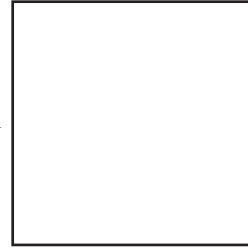


9 (a)

 $(x - 1) \text{ cm}$  $(2x + 1) \text{ cm}$ $x \text{ cm}$  $x \text{ cm}$ NOT TO
SCALE

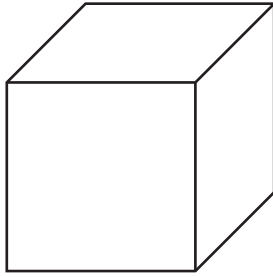
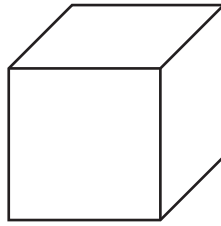
The area of the rectangle is 29 cm^2 greater than the area of the square.
 The difference between the perimeters of the two shapes is $k \text{ cm}$.

Find the value of k .

You must show all your working.

$k = \dots\dots\dots$ [6]

(b)

 $(y + 1)\text{ cm}$  $y\text{ cm}$ NOT TO
SCALE

The volume of the larger cube is 5 cm^3 greater than the volume of the smaller cube.

(i) Show that $3y^2 + 3y - 4 = 0$.

[4]

(ii) Find the volume of the smaller cube.
Show all your working and give your answer correct to 2 decimal places.

..... cm^3 [4]

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