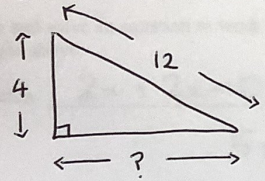
M4 = 40 days to go!

5 The longest side in a right-angled triangle is 12 cm.

One of the shorter sides is 4 cm.

Calculate the perimeter of the triangle.

Give your answer correct to 1 decimal place.



$?^2 + 4^2 = 12^2$

$?^2 + 16 = 144$

$?^2 = 144 - 16$

$?^2 = 128$

$?^2 = 128$

$? = \sqrt{128}$

$? = 11.3$

Answer 27.3 cm [5]

Perimeter $= 4 + 11.3 + 12$

$= 27.3$ cm

19 Solve the equation

$$\frac{4}{x+3} - \frac{3}{x+4} = 1$$

common denominator

$$\frac{4(x+4)}{(x+3)(x+4)} - \frac{3(x+3)}{(x+3)(x+4)} = \frac{(x+3)(x+4)}{(x+3)(x+4)}$$

$$\frac{4(x+4) - 3(x+3)}{(x+3)(x+4)} = \frac{(x+3)(x+4)}{(x+3)(x+4)}$$

$4(x+4) - 3(x+3) = (x+3)(x+4)$

$4x + 16 - 3x - 9 = x^2 + 4x + 3x + 12$

$0 = x^2 + 7x + 12 - x - 7$

$0 = x^2 + 6x + 5$

$x^2 + 6x + 5 = 0$

$(x+5)(x+1) = 0$

$x + 5 = 0$ $\quad$ $x + 1 = 0$

$x = -5$ $\quad$ $x = -1$

Answer -1 & -5 [6]