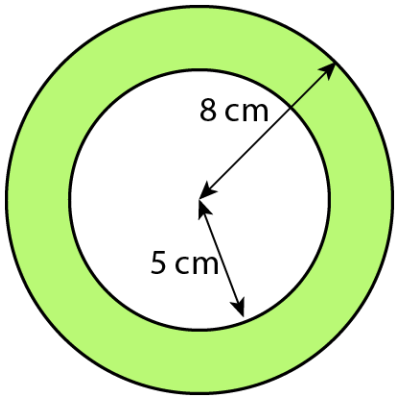
Grade 5 Calculator Problems (2)

Q1 *The diagram shows a play area with a path around it.*

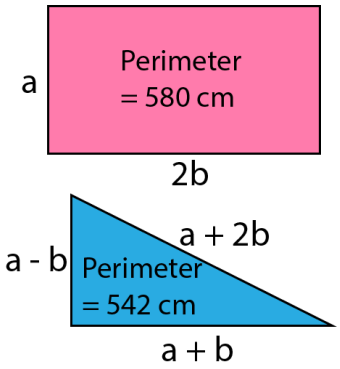
The play area has a radius of 5 m.

The path has a radius of 8 m from the centre of the play area.



Work out the area of the path.
Give your answer to 2 d.p.

Q2 *The diagrams show a triangle and rectangle.*



Work out the area of the area of the rectangle.

Q3 *In a sale normal prices are reduced by 18%.*
A LCD TV has a sale price of £290.28.

By how much is the normal price of the LCD TV reduced?

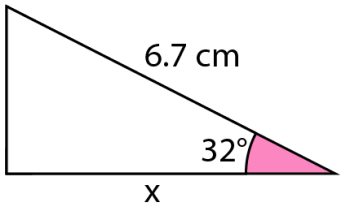
Q4 *Show that*

a) $7(x - 4) - 4(x + 5) = 5(2 - x) + 2(4x - 29)$

b) $(x - 3)(x + 3) = x^2 - 9$

c) $(2x + 1)(3 - x) = x(5 - 2x) + 3$

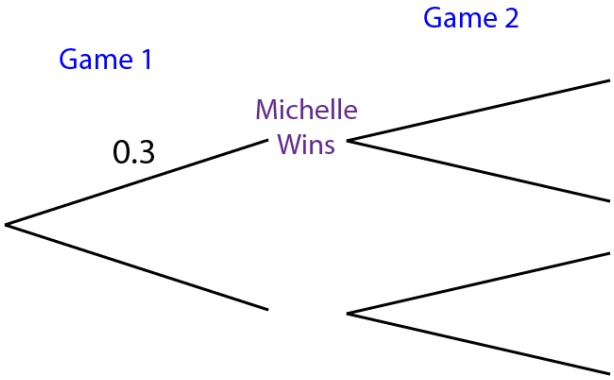
Q5 *Work out the value of x.*



Give your answer correct to 3 significant figures.

Q6 *The probability that Michelle beats Clare at a game of pool is 0.3. They play two games of pool.*

a) Draw a tree diagram to show all the possible outcomes for the two games.

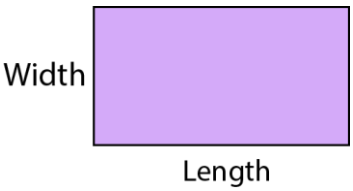


b) Find the probability that Michelle wins exactly one of the games.

Q7 *Make y the subject of*

$$4(y - h) = 2y + 5$$

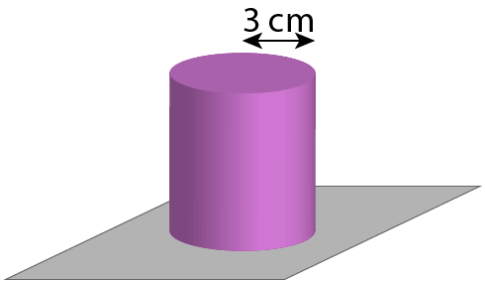
Q8 *The length of this rectangle is double its width.*



The perimeter is greater than 33 cm and less than 51 cm.
Work out the minimum possible area.

Q9 *A cylinder is on a table.*
The radius of the base of the cylinder is 3 cm.
The pressure on the table is 14 newtons/cm²

$$Pressure = \frac{Force}{Area}$$



Work out the force exerted by the cylinder on the table.
Give your answer to 2 d.p.