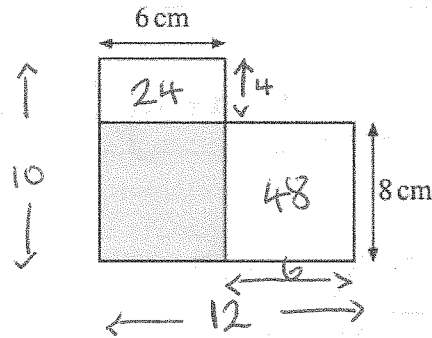


M4 = 12 days to go!

12 A 10 cm × 6 cm rectangular card overlaps a 12 cm × 8 cm card as shown.

Calculate the area **not** shaded.



$$24 + 48$$

Answer 82 cm² [2]

15 A Christmas Log cake has a uniform cross-sectional area of 120 cm² and a length of 22 cm.

Calculate the volume of the cake.

$$\text{Volume} = \text{Area} \times \text{Length}$$
$$120 \times 22$$

Answer 2640 cm³ [2]

1 $d = \frac{e-f}{g}$

Calculate the value of d when $e = -8$, $f = 12$ and $g = 4$

$$\frac{-8 - 12}{4} = \frac{-20}{4} = -5$$

$$-8 - 12 = -20$$

Answer $d =$ -5 [2]

12 (a) Factorise fully

$$3x^2 - 27y^2$$

$$3(x^2 - 9y^2)$$

$$3(x+3y)(x-3y)$$

Dots

Difference
of
Two
Square

Answer $3(x+3y)(x-3y)$ [3]

(b) Simplify fully

$$\frac{3x^2 - 27y^2}{x^2 - 6xy + 9y^2}$$

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

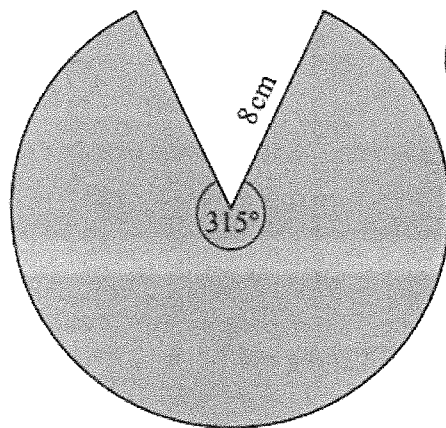
$$x^2 - 6xy + 9y^2$$

$$(x-3y)(x-3y)$$

$$3(x+3y)$$

Answer $\frac{3(x+3y)}{(x-3y)}$ [3]

3



Circle

$$A = \pi r^2$$

$$A = \pi r^2 \times \frac{315}{360}$$

diagram not drawn accurately

Calculate the area of the shaded sector.

Circle $A = \pi \times 8^2$
 $= 201.1 \text{ cm}^2$

Sector $= \frac{315}{360} \times \pi \times 8^2$
 $= 56\pi = 176 \text{ cm}^2$