

1 Substitution

$m = 3$, $n = 5$ and $p = -6$. Work out the value of

a) $4m + n$

b) $2p + n$

a) $4 \times 3 + 5 = 12 + 5 = 17$

b) $2 \times (-6) + 5 = -12 + 5 = -7$

2 Substitution: formulae in words

Number of chairs = $4 \times$ number of tables

a) How many chairs are needed for 9 tables?

b) There are 52 chairs. How many tables are there?

a) $4 \times 9 = 36$ chairs

b) $52 \div 4 = 13$ tables

3 Substitution: using a formula

The perimeter, P cm, of a square with sides of s cm is $P = 4s$.

a) Find P when $s = 7$.

b) Find s when $P = 36$.

a) $4 \times 7 = 28$

b) $36 \div 4 = 9$

4 Rearranging formulae

a) Make x the subject of $y = x + 6$

b) Make x the subject of $y = 3x$

a) $x = y - 6$

b) $x = \frac{y}{3}$

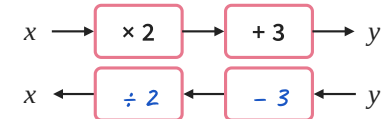
Formulae revision mat answers

Foundation B

5 Rearranging: two steps

a) Fill in the second machine. Use it to make x the subject of $y = 2x + 3$

b) Use your answer to find x when $y = 15$.



a) $x = \frac{y - 3}{2}$

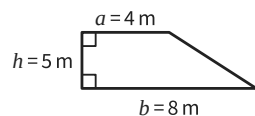
b) $(15 - 3) \div 2 = 6$

6 Formulae sheet: find it and use it

Use your formulae sheet. This garden is a trapezium.

a) Find its area.

b) A bag of seed covers 10 m^2 . How many bags are needed?



Not drawn accurately

a) $(4 + 8) \div 2 \times 5 = 30 \text{ m}^2$

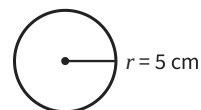
b) $30 \div 10 = 3$ bags

7 Formulae sheet: read the letters

Use your formulae sheet. Give each answer to 1 decimal place.

a) Find the area of the circle.

b) Find the circumference of the circle.



a) $\pi \times 5^2 = 78.5 \text{ cm}^2$

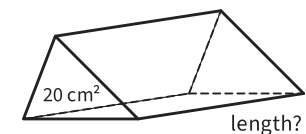
b) $2 \times \pi \times 5 = 31.4 \text{ cm}$

8 Formulae sheet: turn it round

Use your formulae sheet.

a) This prism has a volume of 120 cm^3 . Find its length.

b) Another prism is 5 cm long with a volume of 60 cm^3 . Find the area of its cross section.



a) $120 \div 20 = 6 \text{ cm}$

b) $60 \div 5 = 12 \text{ cm}^2$