

Using Formulas – Medium Activity

4a. The number of adults (a) needed to oversee an Early Years trip is calculated as six children (c) to each adult.

Expressed as the formula:

$$a = 6c$$

If there are 5 adults, how many children can go on the trip?



VF

4b. The number of clean towels (t) needed by a hotel is calculated as 3 per guest (g).

Expressed as the formula:

$$g = 3t$$

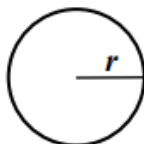
If there are 20 guests, how many clean towels will be needed?



VF

1a. Jordan is calculating the radius of a circle.

He is using the formula $d = 2r$.



He calculates that $d = 20\text{cm}$.

What is the value of r ?

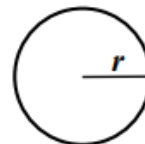


Not to scale

PS

1b. Millie is calculating the diameter of a circle.

She is using the formula $d = 2r$.



She calculates that $r = 8\text{cm}$.

What is the value of d ?



Not to scale

PS

2a. Here is a formula for the amount of flour (f) needed to bake brownies.

$$f = c \times 2$$

Hamish has 2 bars of chocolate (c) and 3 bags of flour.

Does Hamish have enough flour?
Convince me.



R

2b. Here is a formula for the number of tulips (t) planted for every rose (r).

$$r = 3t$$

Maud plants 2 roses; she has planted 5 tulips.

Has she planted enough tulips?
Convince me.



R

3a. Cleaning fluid (c) is made up of 5 cups of water (w) and 2 cups of bleach (b).

Which formula represents this?

A. $c = 5w + 2b$

B. $c = 5 + w + 2 + b$

Explain how you know.



R

3b. Tomato feed (t) is made up of 6 cups of water (w) and 1 cup of plant food (p).

Which formula represents this?

A. $t = 1w + 6p$

B. $t = 6w + 1p$

Explain how you know.



R

8a. To calculate the price of a taxi (p), the firm decide to charge £0.75 per mile (m).

Expressed as the formula:

$$0.75m = p$$

If a journey is 8 miles, how much will a taxi cost?



VF

8b. When baking cupcakes, Sara needs half the amount of sugar (s) as flour (f).

Expressed as the formula:

$$s = \frac{f}{2}$$

How much sugar will she need if she uses 250g of flour?



VF

5a. Here is a formula for the amount of paint needed (p) to paint a wall.

$$p = w \times 50\text{ml}$$

A wall is 13m wide (w). Deni has 650ml of paint.

Does Deni have enough paint? Convince me.



R

5b. Here is a formula for the amount of pet food (f) needed over 2 weeks.

$$f = w \times m$$

A puppy weighs 6kg (w) and is 8 months old (m). His owner has bought 40kg of food to use for the next 2 weeks.

Does his owner have enough pet food? Convince me.



R

Here are some rules for working out what you need on a picnic for p people.



cups (c)
 $c = p + 5$

sandwiches (s)
 $s = 3p + 1$

rugs (r)
 $r = p \div 2$

bananas (b)
 $b = p - 2$

How many cups, sandwiches, rugs and bananas are needed if there are:

- (a) 6 people
- (b) 10 people
- (c) 14 people