

Substitution

Reasoning and Problem Solving

Here are two formulae.

$$p = 2a + 5$$

$$c = 10 - p$$

Find the value of c when $a = 10$

$$x = 2c + 6$$

Whitney says,



$x = 12$ because c
must be equal to 3
because it's the 3rd
letter in the alphabet

Is Whitney correct?

Amir says,

$$\text{When } c = 5, x = 31$$



Amir is wrong.

Explain why.

What would the correct value of x be?

Formulae

Reasoning and Problem Solving

Jack and Dora are using the following formula to work out what they should charge for four hours of cleaning.

$$\text{Cost in pounds} = 20 + 10 \times \text{number of hours}$$

Jack thinks they should charge £60

Dora thinks they should charge £120

Who do you agree with?

Why?

The rule for making scones is use 4 times as much flour (f) as butter (b).

Which is the correct formula to represent this?

A

$$f = \frac{b}{4}$$

B

$$f = 4b$$

C

$$f = b + 4$$

D

$$4f = b$$

Explain why the others are incorrect.

