

Level 2 Functional Skills Maths Self Quizzing Questions

Module 3 – Substituting into Formulae

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$$t=\frac{4p-q}{4}$$



Find the value of t when p = 3.5 and q = 2.7

$$t = \frac{4 \times 3.5 - 2.7}{4}$$

$$14 - 2.7$$

$$t = \frac{14 - 2.7}{4}$$

$$t = \frac{11.3}{4}$$

$$t = 2.825$$

The formula below is used to calculate the Christmas bonus for each person within a company.



$$B=\frac{S-7000}{10}$$

$$B = \frac{S - 7000}{10}$$

$$B = \text{Christmas Bonus}$$

$$S = \text{Yearly Salary}$$

Calculate an employee's Christmas bonus if their yearly salary is £35,000

$$B = \frac{S - 7000}{10}$$

$$B = \frac{35000 - 7000}{10}$$

$$B = \frac{28000}{10}$$

$$B = 2800$$

The employee's Christmas Bonus is £2,800

The formula below is used to calculate the percentage fuel saving when driving at a reduced speed compared to higher speeds



$$F=100\left(\frac{a-b}{b}\right)^2$$

F = % fuel saved

a = original average speed

b = reduced average speed

Calculate F when an original speed of 70 mph is reduced by 10 mph.

Give your answer to the nearest whole number.

$$a = 70$$
$$b = 60$$

$$F = 100 \left(\frac{70 - 60}{60} \right)^2$$

$$F = 100 \left(\frac{10}{60}\right)^2$$

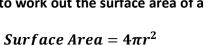
$$F = 100(0.166667)^2$$

$$F = 100 \times 0.027777778$$

$$F = 2.7777778$$

There is a fuel saving of 3%

The formula to work out the surface area of a sphere is:



r = radius

Using 3.14 as your value of π . Work out the total surface area of a sphere that has a radius of 6cm.

Giver your answer to the nearest whole number.

Surface Area =
$$4\pi r^2$$

Surface Area =
$$4 \times 3.14 \times 6^2$$

Surface Area =
$$4 \times 3.14 \times 36$$

$$Surface Area = 452.16$$

Surface Area is $452 cm^2$ to the nearest whole number.

What is the value of 4ah when a = 5 and b = 10



$$4ab = 4 \times 5 \times 10$$

$$4ab = 200$$