



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



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

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

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

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

$$t = 2.825$$

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



$$B = \frac{S - 7000}{10} \quad \begin{array}{l} B = \text{Christmas Bonus} \\ S = \text{Yearly Salary} \end{array}$$

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:



$$\text{Surface Area} = 4\pi r^2$$

$r$  = radius

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

Give your answer to the nearest whole number.

$$\text{Surface Area} = 4\pi r^2$$

$$\text{Surface Area} = 4 \times 3.14 \times 6^2$$

$$\text{Surface Area} = 4 \times 3.14 \times 36$$

$$\text{Surface Area} = 452.16$$

Surface Area is 452  $\text{cm}^2$  to the nearest whole number.

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



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

$$4ab = 200$$