

Find x

$$52^\circ$$

The cost of a trip, c , varies directly to the square root of the number of miles, m .

$$c \propto \sqrt{m}$$

The cost of a 100 mile trip is £50.

$$c = k \times \sqrt{m}$$

$$50 = k \times \sqrt{100}$$

What is the cost of a 400 mile trip?

$$50 = k \times 10$$

$$k = 5$$

$$c = 5 \times \sqrt{m}$$

$$c = 5 \times \sqrt{400}$$

$$c = £100$$

Two ordinary fair dice are rolled.

Work out the probability that at least one of the dice does not land on a 1.

$$P(\text{both } 1) = \frac{1}{6} \times \frac{1}{6} = \frac{1}{36}$$

$$1 - \frac{1}{36} = \frac{35}{36}$$

In August, a shop reduced the price of a coat by $\frac{2}{5}$ and as a result they sold $\frac{3}{4}$ more coats.

By what fraction does the income from the sales of the coat increase?

$$0.6 \times 1.75$$

$$= 1.05$$

5% increase

$$\frac{1}{20}$$

Solve $y^2 + 9y + 2 = 8y + 58$

$$y^2 + y - 56 = 0$$

$$(y+8)(y-7) = 0$$

$$y = -8 \text{ or } y = 7$$