

6th May



Corbettmaths

A spinner is spun 600 times.  
The relative frequencies of each colour are:

White 0.45  
Red 0.35  
Green x 0.2

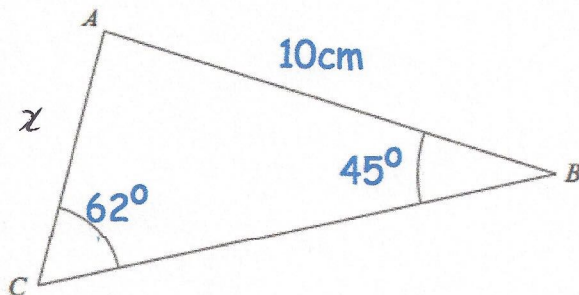
How many more times did the spinner land on white than green?

$$\begin{aligned} 0.45 \times 600 &= 270 \text{ white} \\ 0.2 \times 600 &= 120 \text{ green} \\ \hline &150 \end{aligned}$$

The first flight between Belfast and New York is 40% full.  
Each month the number of passengers increases by 3%.  
How many months will it be before the flight is full?

31 months

$$\begin{aligned} &40 \times 1.03^x \\ 30 \text{ months} &- 97.09\% \\ 31 \text{ months} &- 100.003\% \end{aligned}$$



Find the length of AC.

$$\begin{aligned} \frac{x}{\sin 45} &= \frac{10}{\sin 62} \\ x &= 8.008 \text{ cm} \end{aligned}$$

Find angle BAC

$$\begin{aligned} 180 - 62 - 45 \\ 73^\circ \end{aligned}$$

Find the area of the triangle

$$\begin{aligned} \frac{1}{2} \times 10 \times 8.008 \times \sin 73 \\ 38.29 \text{ cm}^2 \end{aligned}$$

Simplify

$$\frac{3x^2 + 7x + 4}{x^2 + 3x + 2} = \frac{(x+1)(3x+4)}{(x+1)(x+2)}$$

$$\frac{3x+4}{x+2}$$