

18th January

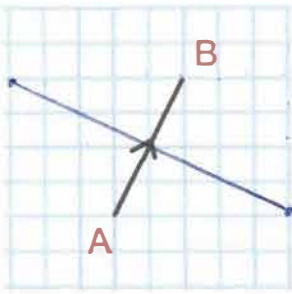


Corbettmaths

Rearrange $y + 3 = x(y + 2)$ to make y the subject of the formula.

$$\begin{aligned} y + 3 &= xy + 2x \\ y - xy &= 2x - 3 \\ y(1 - x) &= 2x - 3 \end{aligned}$$

$$y = \frac{2x - 3}{1 - x}$$



$$\vec{AB} = \begin{pmatrix} 2 \\ 4 \end{pmatrix}$$

Write down a vector that is perpendicular to AB and the twice the length

$$\begin{pmatrix} 8 \\ -4 \end{pmatrix}$$

After a reduction of 3% in the original price, a motorbike is sold for £700.

$$\begin{aligned} 2.5\% \\ 3.5\% \quad \checkmark \end{aligned}$$

Both of these values are correct to one significant figure.

$$\begin{aligned} \pounds 650 \\ \pounds 750 \quad \checkmark \end{aligned}$$

Calculate the greatest possible original price before the reduction was applied.

$$\begin{aligned} 96.5\% &= 750 \\ 1\% &= 7.7720 \dots \\ 100\% &= 777.20 \\ &\pounds 777.20 \end{aligned}$$

Rebecca has 9 cards, each with a number on it.



She picks three cards at random, without replacement.

Rebecca multiplies the three numbers to get a score.

Calculate the probability that the score is an even number

only way of odd is
odd \times odd \times odd

$$P(\text{even}) = 1 - P(\text{odd})$$

$$P(\text{odd}) = \frac{4}{9} \times \frac{3}{8} \times \frac{2}{7} = \frac{1}{21}$$

$$P(\text{even}) = 1 - \frac{1}{21} = \frac{20}{21}$$