

WE DO

Write 72 as a product of its prime factors.

YOU DO

Write 40 as a product of its prime factors.

WE DO

Prove algebraically that the recurring decimal
 $0.\dot{7}\dot{8}$ can be written as $\frac{26}{33}$

YOU DO

Prove algebraically that the recurring decimal $0.6\dot{8}\dot{1}$ can be written as $\frac{15}{22}$

WE DO

The mean of eight numbers is 41.

The mean of two of the numbers is 29.

Work out the mean of the other six numbers.

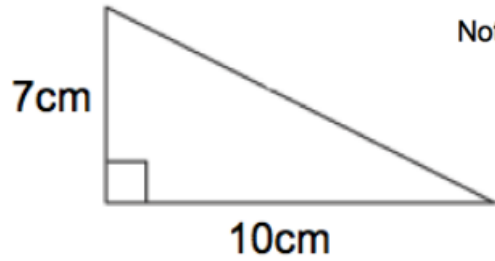
YOU DO

In class A there are 10 students and
in class B there are 20 students.

The mean mark for both classes is 40.
The mean mark for class A is 20.

Work out the mean mark for class B.

WE DO

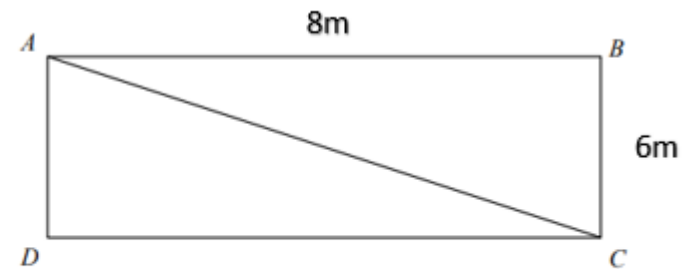


Not drawn accurately

Shown is a right-angled triangle.

Work out the perimeter of the triangle

YOU DO



The shape is made from 5 lines on a field.
Work out the total length of all the lines.

WE DO

Tina has two bags of counters, Bag A and Bag B.

There are 5 red counters and 3 blue counters in bag A.

There are 4 red counters and 5 blue counters in bag B.

Tina takes at random a counter from each bag.

Work out the probability that Tina takes two blue counters.

YOU DO

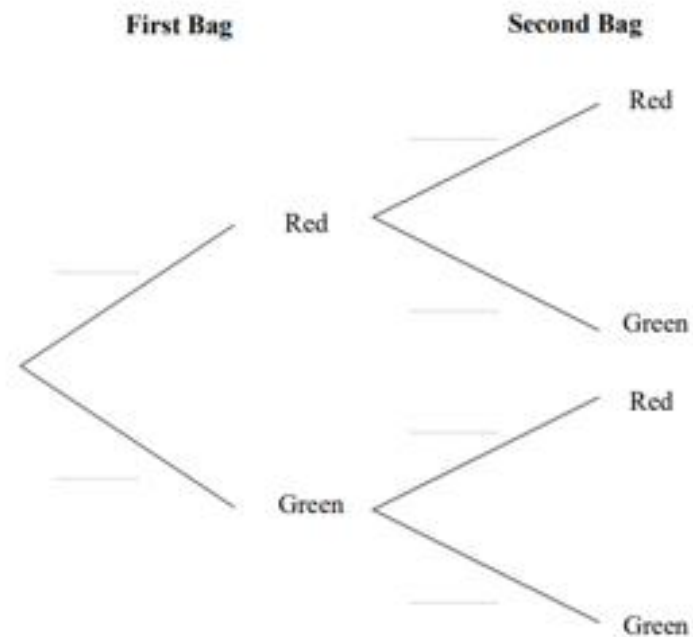
In the first bag there are 4 red balls and 6 green balls.

In the second bag there are 3 red balls and 5 green balls.

Rachel takes at random a ball from the first bag.

She then takes at random a ball from the second bag.

Workout the probability Rachel takes
one ball of each colour.



WE DO

n is an integer.
Prove algebraically that the sum of $n(n + 1)$ and $n + 1$ is always a square number.

YOU DO

n is an integer.
Prove $(2n + 1)(3n - 2) - (6n - 1)(n - 2)$ is always even

WE DO

P is inversely proportional to Q and when $P = 2$, $Q = 2$.
Find the value of P when $Q = 8$.

YOU DO

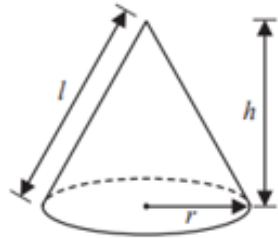
R is inversely proportional to the square root of S and when $R = 1$,
 $S = 36$.
Find the value of R when $S = 9$.

WE DO

A cone has a radius of 5.3cm and a height of 9.8 cm. Work out an estimate for the volume of the cone.

$$\text{Volume of cone} = \frac{1}{3} \pi r^2 h$$

$$\text{Curved surface area of cone} = \pi r l$$

**YOU DO**

A cone has a volume of 595 cm. The radius of the cone is 9.8cm.

$$\text{Volume of cone} = \frac{1}{3} \pi r^2 h$$

$$\text{Curved surface area of cone} = \pi r l$$

Workout an estimate of the height of the cone.

