9th March **Higher 5-a-day**

Corbettmaths

W varies directly to $\sqrt{C}$.
If W = 60 when C = 36, find:

W when C = 64

$W \propto \sqrt{C}$
$W = k\sqrt{C}$
$60 = k \times \sqrt{36}$
$60 = k \times 6$ $k = 10$

$W = 10\sqrt{C}$

$W = 10 \times \sqrt{64}$
$W = 10 \times 8$
$W = 80$

C when W = 160

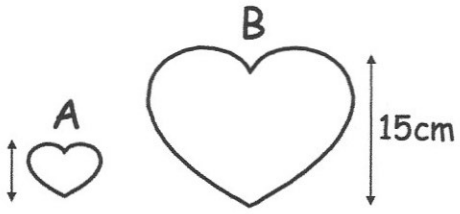
$160 = 10\sqrt{C}$
$16 = \sqrt{C}$
$C = 256$

This can has a mass of 350g to the nearest 10g. 345/355

What is the minimum possible mass of 10 of these cans?

$10 \times 345 = 3450g$

or $3.45kg$



$150 \div 6 = 25$
$\sqrt{25} = 5$

The two hearts are mathematically similar.
The area of shape A is 6cm²
The area of shape B is 150cm²
Work out the height of shape A.

$15 \div 5 = 3cm$

Write 300 as a product of primes in index form.

$2 \times 2 \times 3 \times 5 \times 5$

$2^2 \times 3 \times 5^2$

What is the smallest number that you can multiply 300 by to make a cube number?

$300 = 2^2 \times 3 \times 5^2$
$\downarrow \times 2 \quad \downarrow \times 3^2 \quad \downarrow \times 5$
$? = 2^3 \times 3^3 \times 5^3$

$2 \times 3^2 \times 5 = 90$

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