Target 6 Sheet 01B

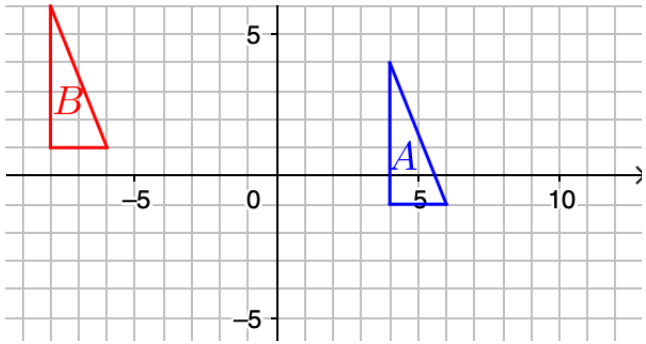
BossMaths

Question 1

A new car is available in 8 standard and 2 pearl-effect exterior colour options. There are 4 interior colour options, but 1 of these is only available with pearl-effect exteriors. How many colour combinations are there?

Question 2

Describe the transformation that maps A to B.



Question 3

Solve, giving your answers in surd form:

$(x-12)^2 = 6$

Question 4

n is a positive integer. Show that

$3(n-2)+6(n-1)+51$

is never a multiple of 9.

Target 6 Sheet 01B

BossMaths

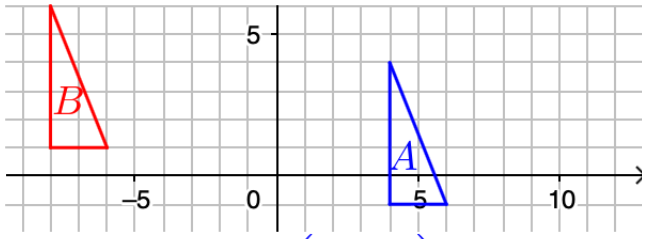
Question 1

A new car is available in 8 standard and 2 pearl-effect exterior colour options. There are 4 interior colour options, but 1 of these is only available with pearl-effect exteriors. How many colour combinations are there?

32

Question 2

Describe the transformation that maps A to B.



Translation by $\begin{pmatrix} -12 \\ 2 \end{pmatrix}$

Question 3

Solve, giving your answers in surd form:

$(x-12)^2 = 6$

$x - 12 = \pm\sqrt{6}$

$x = 12 + \sqrt{6},\ x = 12 - \sqrt{6}$

Question 4

n is a positive integer. Show that $3(n-2) + 6(n-1) + 51$ is never a multiple of 9.

Simplifying, we obtain $9n + 39$.

We can write it as $9(n+4) + 3$.

This is 3 more than a multiple of 9, so is never a multiple of 9.