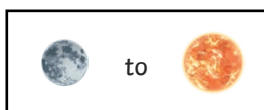
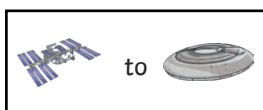


1) Describe the following translations:

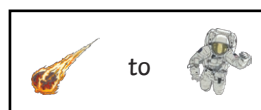
a)



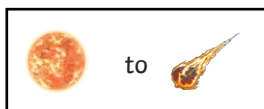
b)



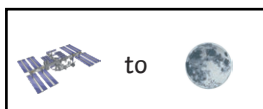
c)



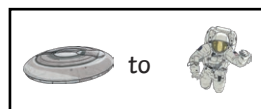
d)



e)



f)

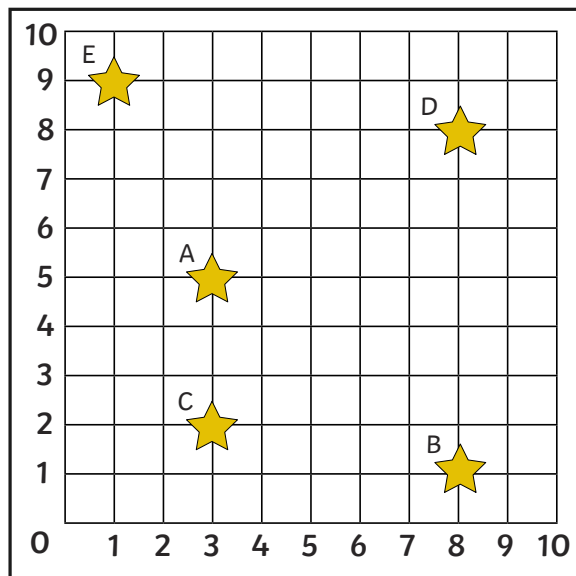


2) Draw a new space object on the grid.

a) Describe the translation from the new space object to the astronaut.

b) Describe the translation from the meteor to the new space object.

A group of children are describing the translations of the stars on this grid. Decide if their statements are true or false. Explain your reasoning.

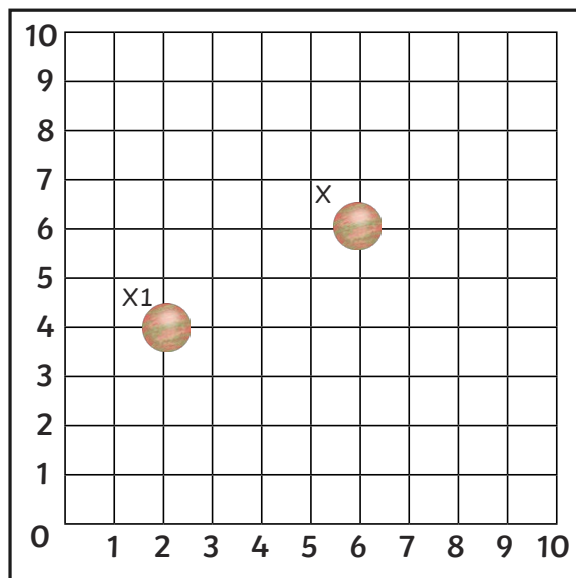


- 1) Kaspar says, 'The translation from D to E is 1 down and 7 right.'

- 2) Veronica says, 'The translation from B to A is 6 left and 5 up.'

- 3) Arthur says, 'The translation from C to D is 5 right and 6 up.'

- 4) Harriet says, 'The translation from E to B is 9 down and 8 right.'



Planet X is translated left 4 and down 2. Its new position is labelled X1.

What do you notice about this translation?

Did you notice that the translation along the x-axis is double the translation along the y-axis?

How many more ways can you translate planet X so that the translation along the x-axis is double the translation along the y-axis?

Make sure you find all the possibilities.