

Puzzle sheet

Transformations

(3, 3)	(3, -6)	(3, -6)	(1, 0)	(15, -10)

(-12, -9)	(-3, 4)	(15, -10)	(4, 3)

(2, 7)	(9, -2)

(4, 2)	(4, 3)	(-1, -6)	(-12, -9)	(-1, -6)

(1, 1)	(9, -2)	(2, 4)	(-1, -6)	(1, 0)	(15, -10)

(3, 3)	(-1, -6)	(1, 1)	(-12, -9)	

(2, -1)	(3, -6)

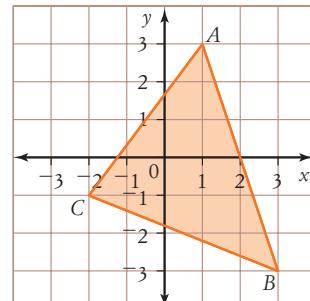
(2, -1)	(-12, -9)	(-1, -6)	(1, 1)	(-1, 2)

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The answer to each question below has a corresponding letter. The numbers in the grid above are the answers to the questions. Determine the coordinates of the image of the vertex after the transformation described in each question below. Then fill in the boxes above with the letters that match the answers, to discover a quote from English poet Alexander Pope's *An essay on criticism*.

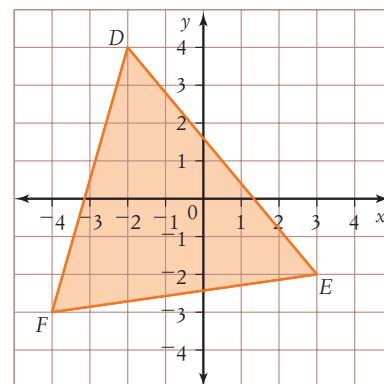
Questions

- 1 Determine the coordinates of the image of the vertex after the transformation described.



Vertex	Transformation	Image point (Answer)	Code letter
a A	Translate 3 units down		L
b A	Translate 1 unit right and 4 units up		I
c B	Reflect in the x -axis		F
d C	Reflect in the y -axis		T
e B	Dilate from the x -axis by a factor of 2		O
f A	Dilate from the y -axis by a factor of 4		H
g C	Rotate about the origin 90° clockwise		D

- 2 Determine the coordinates of the image of the vertex after the transformation described.



Vertex	Transformation	Image point (Answer)	Code letter
a	D Reflect in the y -axis		G
b	D Translate 3 units right and 3 units down		A
c	E Dilate from the origin by a factor of 5		S
d	F Dilate from the origin by a factor of 3		R
e	E Translate 4 units left and 4 units down		E
f	F Rotate about the origin 90° clockwise		U
g	D Rotate about the origin 90° clockwise		W
h	E Dilate from the y -axis by a factor of 3		N