## Reasoning and Problem Solving Reflection with Coordinates

## Developing

1a. The $Y$ axis is reversed and numbered incorrectly. Shapes A and C are not reflected correctly.
2a. H
3a. Nolan is incorrect. You can reflect Shape A in order to use the coordinate (8, 7) as shown below:


## Expected

4a. The $X$ axis is numbered incorrectly; 6 and 7 are the wrong way round. Shape D is not reflected correctly. The second coordinate for shape B is incorrect; it should be $(5,9)$.
5a. A star
6a. Melody is incorrect. You can reflect Shape A in order to use the coordinate (3, 0 ) as shown below:


## Developing

1b. Shape C is not reflected correctly as it is bigger. Shape $D$ is not reflected correctly.
2b. M
3b. Shania is incorrect. You can reflect Shape A in order to use the coordinate (2,
5) as shown below:


## Expected

4b. The $Y$ axis is not numbered on the lines. The mirror line is not straight. The last coordinate for Shape D is written the wrong way round; it should be $(5,0)$ not ( 0,5 ).
5b. A love heart
6b. Luca is incorrect. You can reflect Shape A in order to use the coordinate $(10,5)$ as shown below:


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## Greater Depth

7a. The vertical mirror line is not on a line. All three coordinates are reversed for Shape B and are incorrect; They should be $(4,8),(4,6)$ and $(3,6)$. The last coordinate for Shape C is incorrect; it should be $(8,9)$ not $(8,8)$.
8a. A flower
9a. Riley is incorrect. You can reflect Shape A in order to use the coordinate ( 0 , 1) as shown below:


## Reasoning and Problem Solving

 Reflection with Coordinates
## Greater Depth

7b. Shape D is reflected incorrectly. The coordinates for Shape C are missing completely. The last coordinates for Shapes A, B and C are all incorrect as they are reversed. They should be $(2,5)$, $(6,8)$ and $(5,2)$ not $(5,2),(8,6)$ and $(2,5)$.
8b. A butterfly
9b. Sanai is incorrect. You can reflect Shape A in order to use the coordinate (8, 9) as shown below:


