LESSON MAKER PRO

Mirror Point Mission

Find points reflected across the x-axis.

GRADE 6 · 6.NS.C.11.b

6.NS.C.11.b "Identify (a,b) and (a,-b) as reflections across the x-axis."

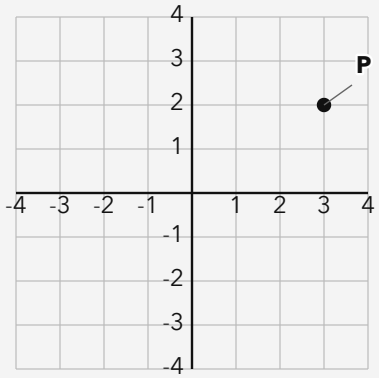
NAME _____ DATE _____

THE REFLECTION RULE

A reflection across the x-axis keeps the x-coordinate the same. It changes the sign of the y-coordinate, so (a,b) becomes (a,-b).

WORKED EXAMPLE

Where does point P land when it reflects across the x-axis?



1. Read P as (3,2).
2. Keep the x-coordinate, 3.
3. Change the y-coordinate from 2 to -2.

Answer: (3,-2)

PRACTICE 4 problems

1 Reflect (1,4) across the x-axis. Give the new coordinates.

ANSWER _____

2 Reflect (-1,-5) across the x-axis. Give the new coordinates.

ANSWER _____

3 Reflect (0,-6) across the x-axis. Give the new coordinates.

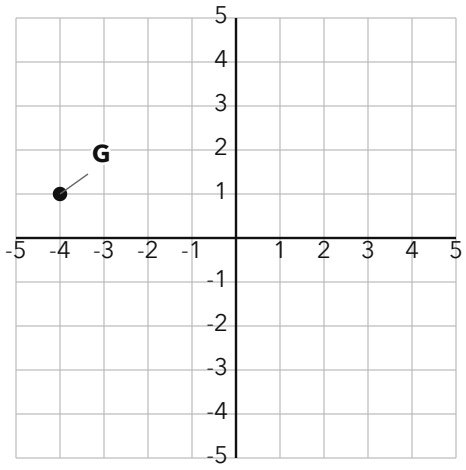
ANSWER _____

4 Reflect (-4,-1/4) across the x-axis. Give the new coordinates.

ANSWER _____

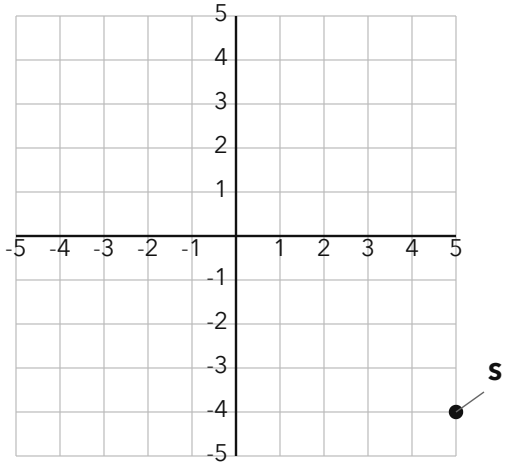
APPLY IT Show your work

1 On a game map, a gem is at G. A second gem is its reflection across the x-axis. Where is the second gem?



ANSWER _____

2 In a design app, a sticker is at S. The app reflects it across the x-axis. Where is its copy?



ANSWER _____

CHALLENGE One step up

Maya says (-5,-1/4) reflects across the x-axis to (5,1/4). Is she right? Give the correct reflection and explain.

WORK SPACE AND ANSWER

ANSWER KEY

Mirror Point Mission

GRADE 6 · 6.NS.C.11.b

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Reflect (1,4) across the x-axis. Give the new coordinates.	**(1,-4)**
2	Reflect (-1,-5) across the x-axis. Give the new coordinates.	**(-1,5)**
3	Reflect (0,-6) across the x-axis. Give the new coordinates.	**(0,6)**
4	Reflect (-4,-1/4) across the x-axis. Give the new coordinates.	**(-4,1/4)**

PART 2 · APPLY IT

1. **(-4,-1)** G is at (-4,1). Keep -4 as the x-coordinate and change 1 to -1.
2. **(5,4)** S is at (5,-4). Keep 5 as the x-coordinate and change -4 to 4.

CHALLENGE

No. The reflection is (-5,1/4) because the x-coordinate stays -5 and only the y-coordinate changes sign.

Accept equivalent fractions in coordinates. For the challenge, the explanation must state that an x-axis reflection keeps the x-coordinate the same.