Student Response Example: Needs Practice

This is an example of a "Needs Practice" student response using the Mastery Check Rubric.

Use this example to help you understand the types of student responses that could indicate that your student needs to do more practice in the subject area in order to achieve mastery.

It is not an actual problem from the curriculum.

Show What You Know

Using the numbers $\{-3, -1, 0, 1, 2\}$ only once, find two ordered pairs that result in a slope between $-\frac{1}{2}$ and zero ($-\frac{1}{2} < m < 0$). Show all work. Do not erase; rather, keep a log of your attempts.

This student found an answer but repeated the number 1 in their solution.

$(\boxed{-3}, \boxed{2})(\boxed{1}, \boxed{1})$

$(-3, 2), (0, 1)$

$$m = \frac{2-(-1)}{-3-0} = \frac{3}{-3} = -1 \times$$

$(-3, 2), (1, 1)$

$$m = \frac{2-1}{-3-1} = \frac{1}{-4} \checkmark$$

$(0, -1), (2, -3)$

$$m = \frac{-1-(-3)}{0-2} = \frac{2}{-2} = -1 \times$$

Student Response Example: Progressing

This is an example of a "Progressing" student response using the Mastery Check Rubric.

Use this example to help you understand the types of student responses that could indicate that your student has adequately mastered the subject area.

It is not an actual problem from the curriculum.

Show What You Know

Using the numbers $\{-3, -1, 0, 1, 2\}$ only once, find two ordered pairs that result in a slope between $-\frac{1}{2}$ and zero ($-\frac{1}{2} < m < 0$). Show all work. Do not erase; rather, keep a log of your attempts.

This student showed their work and kept trying until they found an answer that matched the directions.

$\left(\boxed{-3}, \boxed{1}\right)\left(\boxed{2}, \boxed{0}\right)$

$(-3, 0), (-1, 1)$

$m = \frac{0-1}{-3-(-1)} = \frac{-1}{-2}$ ×

$(-3, -1), (0, 1)$

$m = \frac{-1-1}{-3-0} = \frac{-2}{-3} = \frac{2}{3}$ ×

$(-3, 2), (-1, 1)$

~~$m = \frac{2-1}{-3-(-1)} = \frac{1}{-2}$~~ ✓

$(-3, -1), (2, 1)$

$m = \frac{-1-1}{-3-2} = \frac{-2}{-5} = \frac{2}{5}$ ×

The student thought they had the correct combination, but when asked if $-\frac{1}{2}$ is greater than $-\frac{1}{2}$, they realized that this answer does not make the inequality true.

$(-3, 2), (1, -1)$

$m = \frac{2-(-1)}{-3-1} = \frac{3}{-4}$ ×

$(-3, 1), (2, 0)$

$m = \frac{1-0}{-3-2} = \frac{1}{-5}$ ✓

Student Response Example: Exceeding

This is an example of an "Exceeding" student response using the Mastery Check Rubric.

Use this example to help you understand the types of student responses that could indicate that your student has exceptional understanding and mastery of the subject area.

It is not an actual problem from the curriculum.

Show What You Know

Using the numbers $\{-3, -1, 0, 1, 2\}$ only once, find two ordered pairs that result in a slope between $-\frac{1}{2}$ and zero ($-\frac{1}{2} < m < 0$). Show all work. Do not erase; rather, keep a log of your attempts.

This student showed many attempts and wrote some notes on their paper to help find patterns and make sense of the problem.

$$\left(\begin{bmatrix}-3\\-3\end{bmatrix}, \begin{bmatrix}1\\0\end{bmatrix}\right)\left(\begin{bmatrix}2\\0\end{bmatrix}, \begin{bmatrix}0\\-1\end{bmatrix}\right)$$

$(-3, -1), (0, 1)$

$$m = \frac{-1-1}{-3-0} = \frac{-2}{-3} = \frac{2}{3} \times$$

Answer too large, must be smaller

$(-3, 1), (0, -1)$

$$m = \frac{1-(-1)}{-3-0} = \frac{2}{-3} \times$$

Must be ~~smaller~~ between $-\frac{1}{2}$ and 0.

$(-3, 1), (2, 0)$

$$m = \frac{1-0}{-3-2} = \frac{1}{-5} \checkmark$$

Between $\frac{1}{2}$ and zero.
Bottom needs to be larger than top of fraction.

$(-3, 0), (2, -1)$

$$m = \frac{0-(-1)}{-3-2} = \frac{1}{-5} \checkmark$$

Followed this and found another one that works!