Name: _____ Date: _____

TAKS: How Does It Translate?
Student Worksheet

What is a translation? How do you know how a graph moves? Use what know about the equations and use the graphing calculator to confirm your answer.

Look at the equation below.

16 How does the graph of $y = 3x^2 - 5$ compare with the graph of $y = 3x^2 + 8$?

Is it the added number or the multiplied number that changes? Predict how that changes the graph?

Use the graphing calculator to confirm you answer choice. Did the graph change as you predicted? _____

F The graph of $y = 3x^2 - 5$ is 3 units above the graph of $y = 3x^2 + 8$.

G The graph of $y = 3x^2 - 5$ is 13 units below the graph of $y = 3x^2 + 8$.

H The graph of $y = 3x^2 - 5$ is 3 units to the right of the graph of $y = 3x^2 + 8$.

J The graph of $y = 3x^2 - 5$ is 13 units to the left of the graph of $y = 3x^2 + 8$.

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Which equation would come from the translation describe below?

_____

Use the graphing calculator to confirm your answer choice. Did the equation you selected translate as you predicted?

_____

40 If the graph of $y = \frac{3}{4}x^2 - 1$ is translated up 4 units, which of the following equations represents the resulting graph?

F $y = 3x^2 - 4$

G $y = \frac{3}{4}x^2 + 3$

H $y = 3x^2 + 4$

J $y = \frac{3}{4}x^2 - 5$

Predict the translation of the graph described below?

_____

Use the graphing calculator to confirm you answer choice. Did the graph change as you predicted? _____

36 If $c = -5$, how does the graph of $y = x^2 + 2c$ compare to the graph of $y = x^2 + c$?

F The graph of $y = x^2 + 2c$ is below the graph of $y = x^2 + c$.

G The graph of $y = x^2 + 2c$ is above the graph of $y = x^2 + c$.

H The graph of $y = x^2 + 2c$ is narrower than the graph of $y = x^2 + c$.

J The graph of $y = x^2 + 2c$ is wider than the graph of $y = x^2 + c$.