**Multiple Representations of Functions Task**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **x** | **f(x)** |  | **x** | **g(x)** |
| -3 | 7 |  | -2 | 12 |
| -2 | 5 |  | 0 | -2 |
| 0 | 1 |  | 1 | -3 |
| 1 | -1 |  | 2 | 0 |
| 4 | -7 |  | 4 | 18 |

 ***f*(x) *g*(x)**

 

1. Find *f*(1) and *f*(*g*(1)).

 a. *f*(1) = \_\_\_\_\_\_\_\_\_

*b. f*(*g*(1)) = \_\_\_\_\_\_\_\_\_

c. How did you solve each and why did you choose your approach?

1. Find *f*(-1) and *f*(*g*(-1)).

 a. *f*(-1) = \_\_\_\_\_\_\_\_\_

*b. f*(*g*(-1)) = \_\_\_\_\_\_\_\_\_

c. How did you solve each and why did you choose your approach?

1. Using the same functions above, how would you find $f(\frac{2}{3})$ and $f(g\left(\frac{2}{3}\right))$?

**Multiple Representations of Functions Task - KEY**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **x** | **f(x)** |  | **x** | **g(x)** |
| -3 | 7 |  | -2 | 12 |
| -2 | 5 |  | 0 | -2 |
| 0 | 1 |  | 1 | -3 |
| 1 | -1 |  | 2 | 0 |
| 4 | -7 |  | 4 | 18 |

***f*(x) *g*(x)**



1. Find *f*(1) and *f*(*g*(1)).

 a. *f*(1) = -1

*b. f*(*g*(1)) = 7

c. How did you solve each and why did you choose your approach?

 Students may explain using tables or graphs.

1. Find *f*(-1) and *f*(*g*(-1)).

 a. *f*(-1) = 3

*b. f*(*g*(-1)) = -5

c. How did you solve each and why did you choose your approach?

 Students should explain by using a graph.

1. Using the same functions above, how would you find $f(\frac{2}{3})$ and $f(g\left(\frac{2}{3}\right))$?

Answers may vary. Students may find the equation of the line or use estimation