

PEEL & STICK Activity

PIECEWISE FUNCTIONS *Graphing Activity*

Directions: Graph each function, then identify the domain and range.

1 $f(x) = \begin{cases} -x-5 & \text{if } x < -2 \\ 3x+1 & \text{if } x \geq -2 \end{cases}$

Domain: All Real Numbers

Range: **D** $y \geq -5$

3 $f(x) = \begin{cases} \frac{1}{2}x+3 & \text{if } x < -4 \\ -\frac{3}{4}x+4 & \text{if } x \geq -4 \end{cases}$

Domain: **O** $x \neq -4$

Range: **B** $y < 7$

4 $f(x) = \begin{cases} x-2 & \text{if } x < 1 \\ 4x-7 & \text{if } x \geq 1 \end{cases}$

Domain: All Real Numbers

Range: All Real Numbers

6 $f(x) = \begin{cases} 3 & \text{if } x < -2 \\ -\frac{3}{2}x+2 & \text{if } -2 < x \leq 4 \\ 1 & \text{if } x > 4 \end{cases}$

PIECEWISE FUNCTIONS

(Includes Linear, Quadratic, and Exponential Functions)

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PIECEWISE FUNCTIONS

Peel & Stick Activity

Objective: To practice graphing piecewise functions and identifying the domain and range. There are 12 graphs total. This includes linear, quadratic, and exponential functions.

***An option with interval notation is included as well.**

Directions:

1) Print the graphs. I generally print them double-sided on colored paper.

2) Print the Labels. Cut the label sheets in thirds. For example, if you have 24 students, you only need to print 8 sheets.

***I use white Avery 8167 Return Labels in white.**

3) Give each student the graphs and labels. They graph each function, then identify the domain and range for each graph and stick them on their paper. An answer key is provided to check the answers. The letters make the resource easy to grade. Since "All Real Numbers" is used respectively, it is not lettered.

Suggestions if you do not wish to use labels:

- Use as a cut and paste activity instead. Print labels onto plain paper and students can cut them out.
- Students can write the domain and range directly on the graphs paper, then cross them off as they use them from the choices.

PIECEWISE FUNCTIONS *Graphing Activity!* Name: _____ Per: _____

Directions: Graph each function, then identify the domain and range.

1 $f(x) = \begin{cases} -x-5 & \text{if } x < -2 \\ 3x+1 & \text{if } x \geq -2 \end{cases}$

Domain:

Range:

2 $f(x) = \begin{cases} \frac{2}{3}x-5 & \text{if } x \leq 3 \\ 2x-7 & \text{if } x > 3 \end{cases}$

Domain:

Range:

3 $f(x) = \begin{cases} \frac{1}{2}x+3 & \text{if } x < -4 \\ -\frac{3}{4}x+4 & \text{if } x \geq -4 \end{cases}$

Domain:

Range:

4 $f(x) = \begin{cases} x-2 & \text{if } x < 1 \\ 4x-7 & \text{if } x \geq 1 \end{cases}$

Domain:

Range:

5 $f(x) = \begin{cases} 2-x & \text{if } x < -1 \\ 5 & \text{if } -1 \leq x < 2 \\ -2x-3 & \text{if } x \geq 2 \end{cases}$

Domain:

Range:

6 $f(x) = \begin{cases} 3 & \text{if } x < -2 \\ \frac{1}{2} & \text{if } x \geq -2 \end{cases}$

Domain:

Range:

8 $f(x) = \begin{cases} -x^2-4x-3 & \text{if } x < -1 \\ x+4 & \text{if } x > -1 \end{cases}$

Domain:

Range:

10 $f(x) = \begin{cases} 2x^2+16x+31 & \text{if } x \leq -3 \\ -x^2-2x-3 & \text{if } x > -3 \end{cases}$

Domain:

Range:

All Real Numbers	All Real Numbers	D $y \geq -5$	T $y \leq -1$ or $y > 3$
All Real Numbers	All Real Numbers	E $y > 1$	K $-7 < y \leq -1$ or $y > 3$
All Real Numbers	All Real Numbers	F $y < 4$	L $x \neq -1$
All Real Numbers	A $y \geq -6$	G $-4 \leq y < 5$	M $x \neq 1$
All Real Numbers	B $y < 7$	H $y \leq 2$ or $y \geq -1$	N $x \neq -2$
All Real Numbers	C $y > -3$	I $y \leq -3$ or $y > -1$	O $x \neq -4$