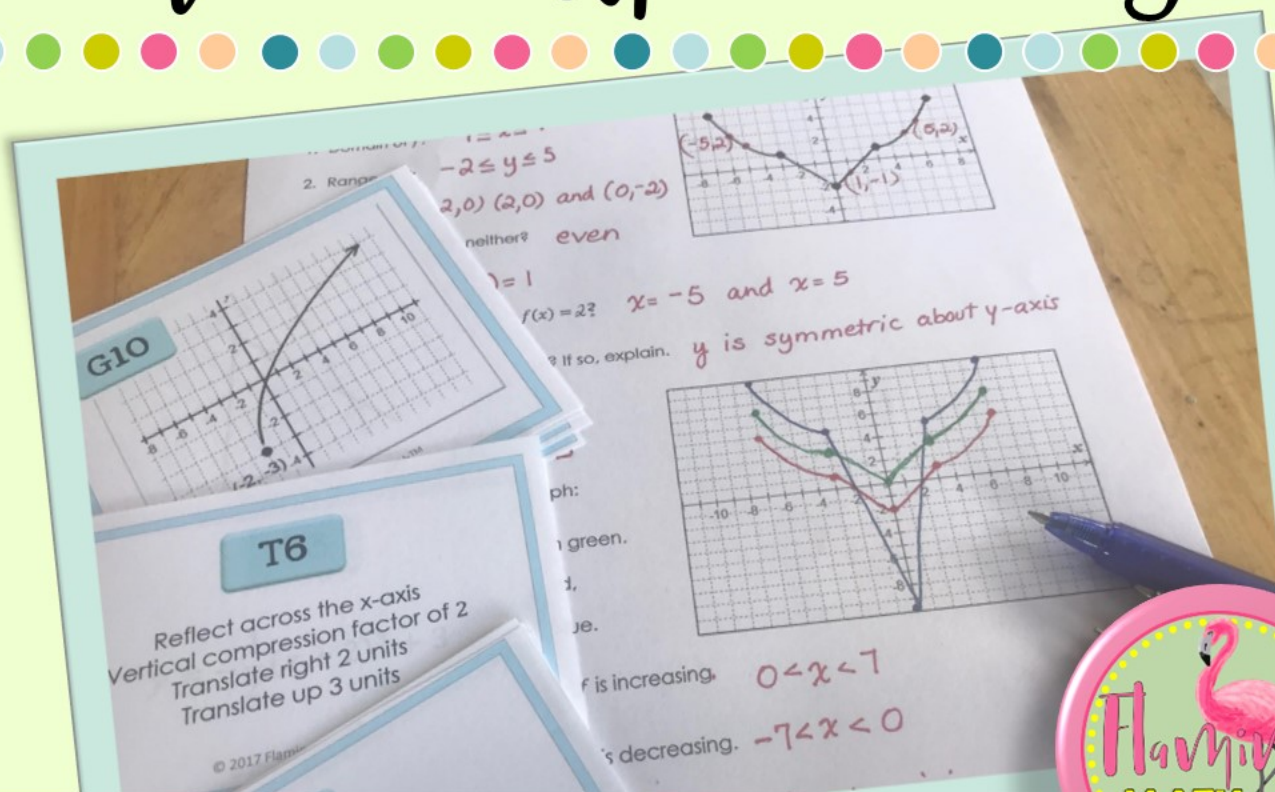


Precalculus Honors

Graphical

Transformations

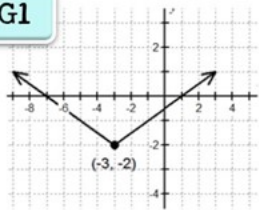
Match-Up Activity



Task Cards

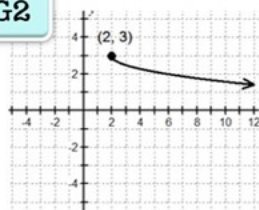


G1



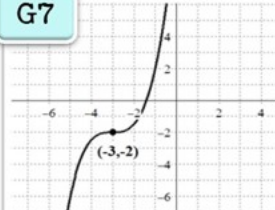
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G2



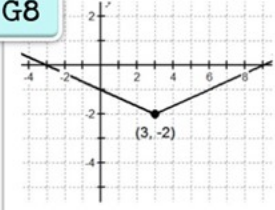
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G7



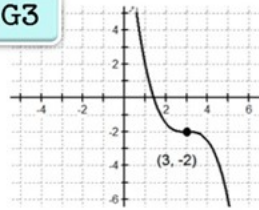
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G8



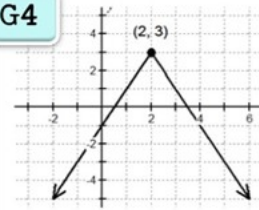
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G3



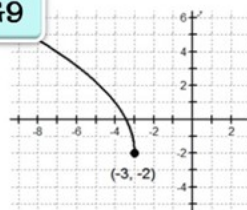
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G4



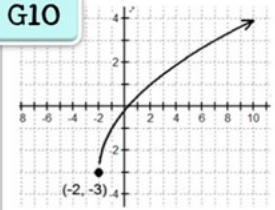
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G9



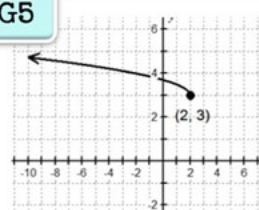
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G10



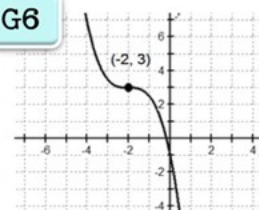
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G5



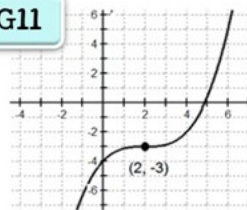
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G6



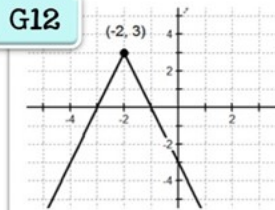
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G11



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G12



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E1

$$y = \frac{1}{2}(x+3)^3 - 2$$

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E2

$$y = \left(\frac{1}{2}(x-2)\right)^3 - 3$$

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E9

$$y = -2|x-2| + 3$$

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E10

$$y = \frac{1}{3}|x-3| - 2$$

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E3

$$y = -\frac{1}{2}(x+2)^3 + 3$$

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E4

$$y = -\frac{1}{2}\sqrt{x-2} + 3$$

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E11

$$y = \frac{1}{2}\sqrt{2-x} + 3$$

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E12

$$y = 3\sqrt{-(x+3)} - 2$$

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E5

$$y = -3|x+2| + 3$$

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E6

$$y = \frac{1}{2}(3-x)^3 - 2$$

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T1

Reflect across x-axis
Vertical stretch factor 2
Translate right 2 units
Translate up 3 units

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T2

Reflect across x-axis
Vertical stretch factor 3
Translate left 2 units
Translate up 3 units

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E7

$$y = \left|\frac{1}{2}(x+3)\right| - 2$$

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E8

$$y = 2\sqrt{x+2} - 3$$

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T3

Horizontal stretch factor 2
Translate left 3 units
Translate down 2 units

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T4

Vertical compression factor 1/3
Translate right 3 units
Translate down 2 units

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T5
 Vertical stretch factor 2
 Translate left 2 units
 Translate down 3 units
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T6
 Reflect across the x-axis
 Vertical compression factor of $1/2$
 Translate right 2 units
 Translate up 3 units
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T7
 Reflect across y-axis
 Vertical stretch factor 3
 Translate left 3 units
 Translate down 2 units
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T8
 Reflect across x-axis
 Vertical compression factor $1/2$
 Translate left 2 units
 Translate up 3 units
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T9
 Horizontal stretch factor of 2
 Translate right 2 units
 Translate down 3 units
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T10
 Reflect across y-axis
 Vertical compression factor of $1/2$
 Translate right 2 units
 Translate up 3 units
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T11
 Vertical compression factor of $1/2$
 Translate left 3 units
 Translate down 2 units
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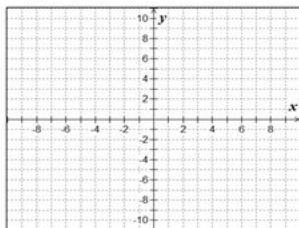
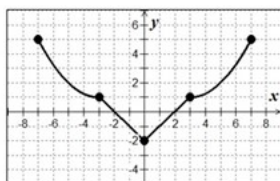
T12
 Reflect across y-axis
 Vertical compression factor of $1/2$
 Translate right 3 units
 Translate down 2 units
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Extension Activity

Name _____

For the graph of the function f shown below, answer the following:

- Domain of f :
- Range of f :
- Intercepts
- Is f even, odd, or neither?
- Find $f(3)$
- For what value(s) of x is $f(x) = 2$?
- Is the graph of f symmetric? If so, explain.
- Solve for $f(x) > 0$.
- Use the grid at right to graph:
 - Graph $y = f(x + 2)$ in green.
 - Graph $y = f(-x)$ in red,
 - Graph $y = 2f(x)$ in blue.
- Name the interval(s) where f is increasing.
- Name the interval(s) where f is decreasing.
- Find the local maxima and local minima.
- What is the average rate of change of f from 1 to 5?



A Transformations Match Up Activity

Names: _____

GRAPH	EQUATION	TRANSFORMATION
G1		
G2		
G3		
G4		
G5		
G6		
G7		
G8		
G9		
G10		
G11		
G12		