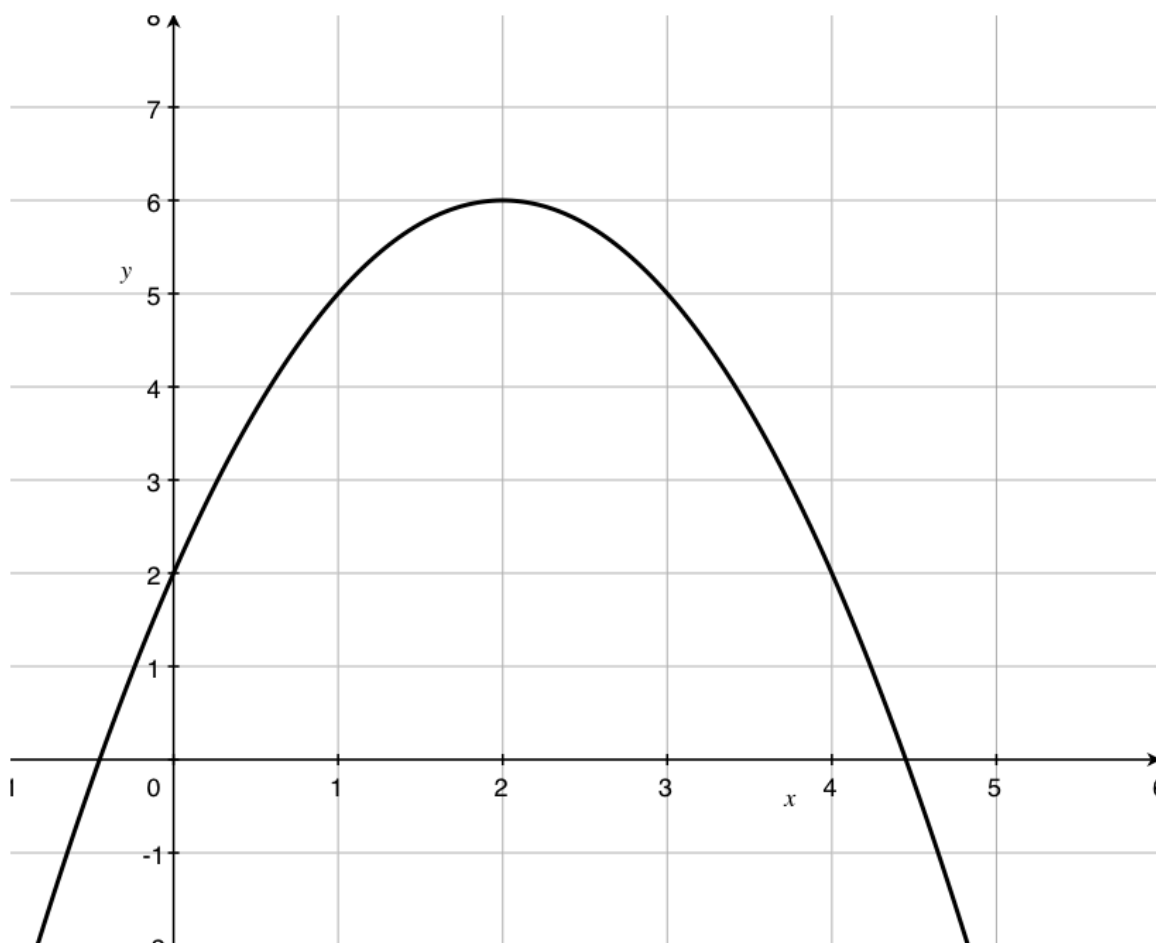


Precalc – Warm Up – 2/2/11

Name: _____

Period: _____

1) The graph below represents the function $f(x) = -x^2 + 4x + 2$.



a) Estimate the instantaneous rate of change at $x=3$ using the graph.

b) Estimate the instantaneous rate of change at $x=1$ using the equation.

Precalc – Practice Mastery Check – 2/2/11

Name: _____

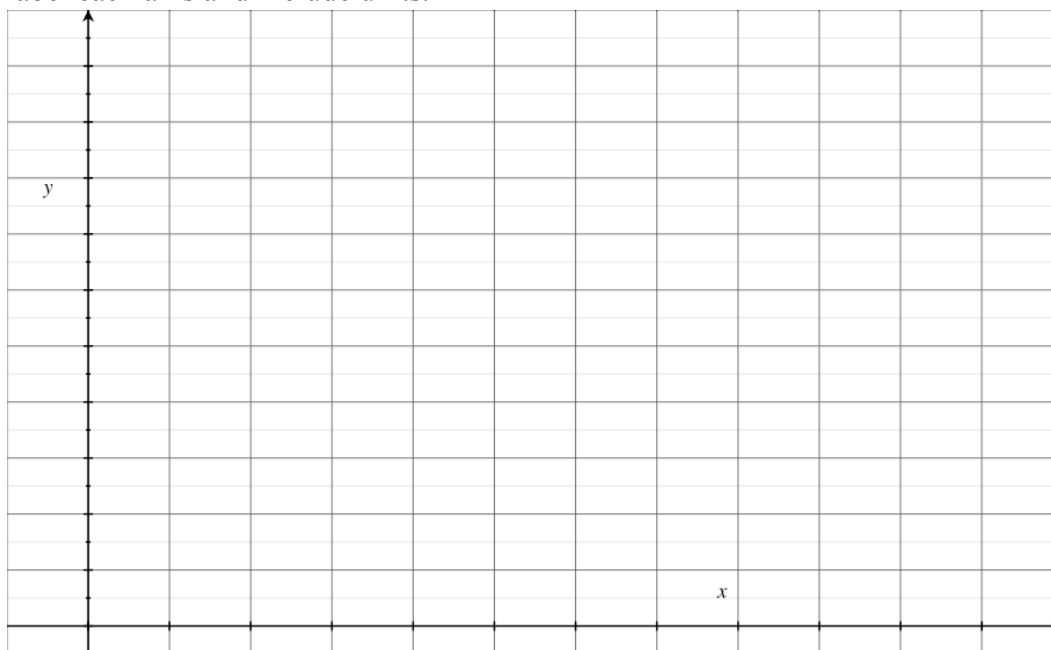
Period: _____

Students will be able to prepare for a mastery check by taking a practice mastery check and correcting mistakes.

- 1) A full bathtub holds 160 gallons of water. When the plug is pulled half of the water drains out of the bathtub every minute.

a) How many minutes will it take until the bathtub has 10 gallons in it?

- b) Sketch a graph of the number of gallons of water in the tub over time. Be sure to label each axis and include units.



- c) What is the average rate of change of the water from $x=1$ to $x=3$.

- d) Estimate the instantaneous rate of change of water in the tub at $x=3$ using the graph.

- e) The equation for the function that you sketched is $f(x) = 160(2^{-x})$. Use the equation to find a more accurate estimate of the instantaneous rate of change of water in the tub at $x=3$.

Precalc – Exit Slip – 2/2/11

Name: _____

Period: _____

Did you correct any mistakes today? Which ones?

What do you need to do to prepare for the mastery check?

Precalc – Exit Slip – 2/2/11

Name: _____

Period: _____

Did you correct any mistakes today? Which ones?

What do you need to do to prepare for the mastery check?