Acc Algebra I 7.5 – Notes & Practice

Name _____ Date: _____

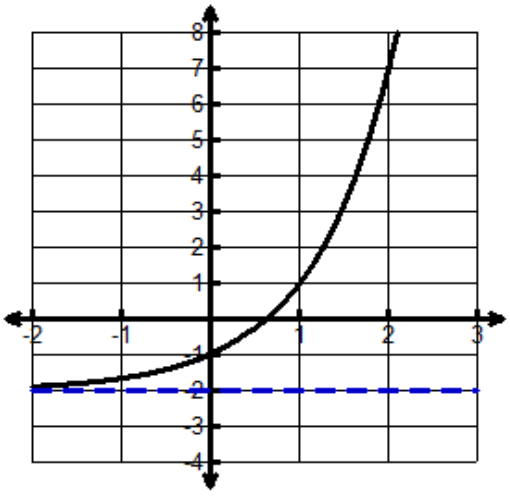
Finding Exponential Equations From Graphs

We've spent some time going from an equation to a graph, but today we're going to work backwards. To write the equation of an exponential graph in the form $f(x) = a \bullet b^{x-h} + k$, we need to find a, b, h, and k, then plug them in.

- a: If it zooms up, a is positive. If it zooms down, a is negative. We aren't going to deal with stretch/shrink this semester.
- b: Look for the WHOLE NUMBER distances from the asymptote to the graph. What's the common ratio? That's your b term.
- h: Look for the (0,1) equivalent (exactly 1 unit up from the asymptote. Has it moved left/right from the y-axis? If so, that's your h value.
- k: Look at your asymptote.

Get all 4 pieces, plug them in, and walk away. Let's try it out!!!!!

A)

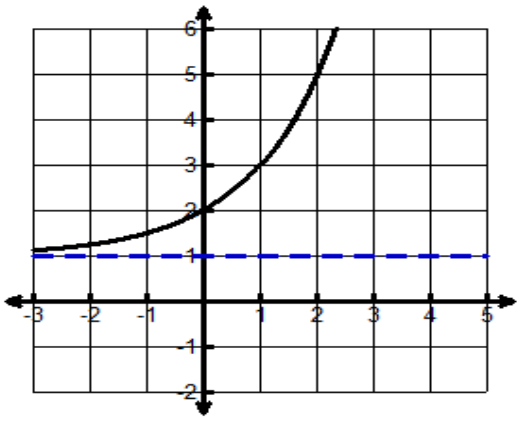


a = _____ b = _____

h = _____ k = _____

Equation: _____

B)

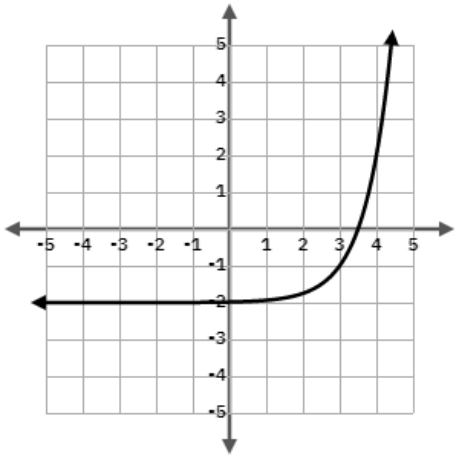


a = _____ b = _____

h = _____ k = _____

Equation: _____

1)



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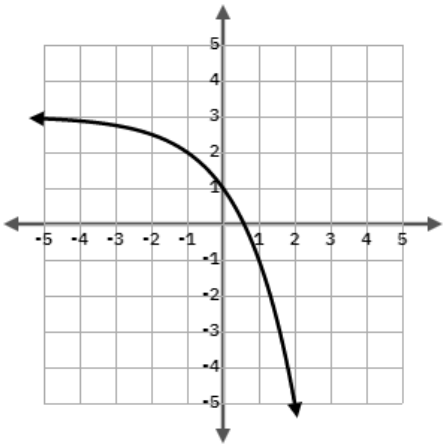

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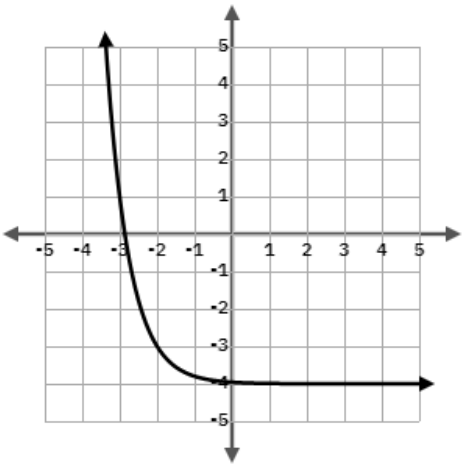

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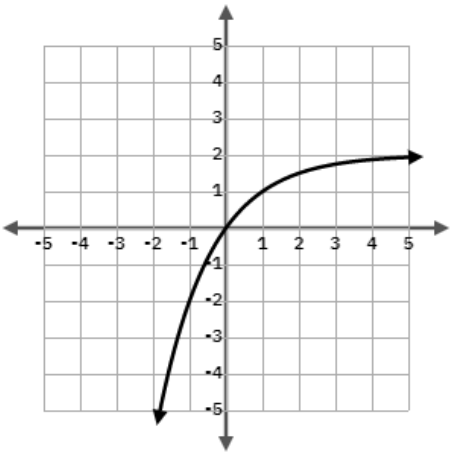

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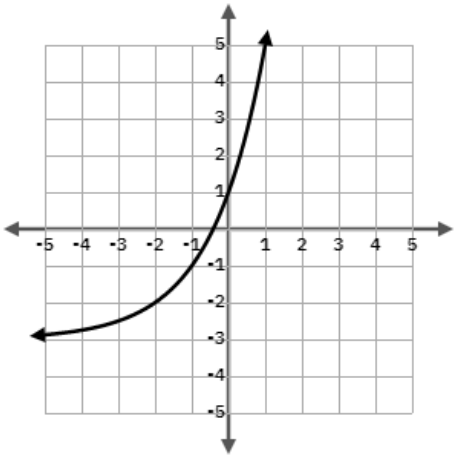

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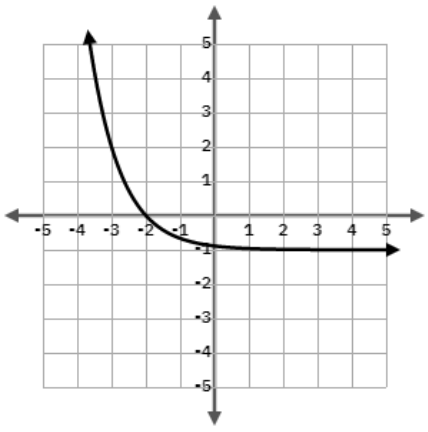
6)



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