Math-3A   Name_____ ID: 1
SM3-A HW #1-5 (cube, cube root)   Date_____ Period____

1) a) Explain what transformations have been applied to the parent function.
   (b) Where is the inflection point?

$$y = \sqrt[3]{x + 1} - 8$$

2) a) Explain what transformations have been applied to the parent function.
   (b) Where is the inflection point?
$$y = -2 + \sqrt[3]{x - 4}$$

3) (a) Explain what transformations have been applied to the parent
   function.
   (b) Where is the inflection point?

$$y = -4 + 2\sqrt[3]{x - 3}$$

4) What is the inflection point of the graph
   given by:
   $$y = 4(x - 3)^3 + 5$$

5) What is the vertex of the absolute value
   function?
   $$y = -3|x + 1| - 6$$

6) Describe the transformation of the
   absolute value parent function.
   $$y = -3|x - 5| - 7$$

7) Which of the following equations types have vertexes?
   (a) $y = x$ (b) $y = x^2$ (c) $y = x^3$ (d) $y = \sqrt{x}$ (e) $y = \sqrt[3]{x}$ (f) $y = |x|$
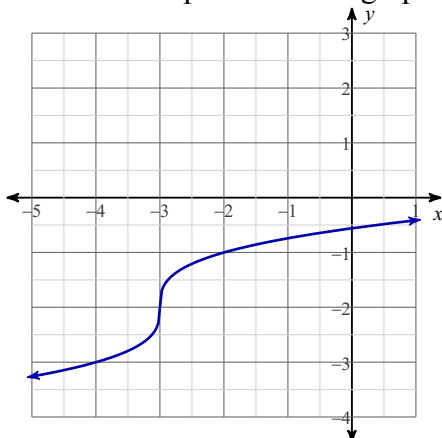
8) Which of the following equations types have inflection points?
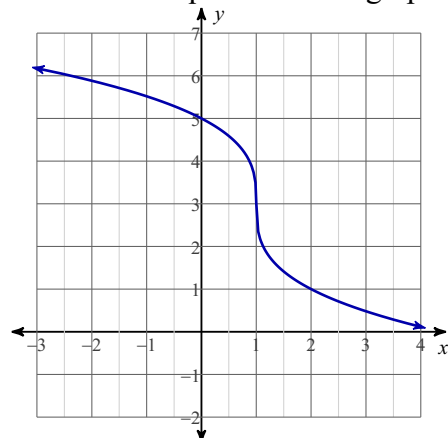   (a) $y = x$ (b) $y = x^2$ (c) $y = x^3$ (d) $y = \sqrt{x}$ (e) $y = \sqrt[3]{x}$ (f) $y = |x|$

9) Which of the following equations types have either an absolute minimum or an absolute
   maximum?
   (a) $y = x$ (b) $y = x^2$ (c) $y = x^3$ (d) $y = \sqrt{x}$ (e) $y = \sqrt[3]{x}$ (f) $y = |x|$
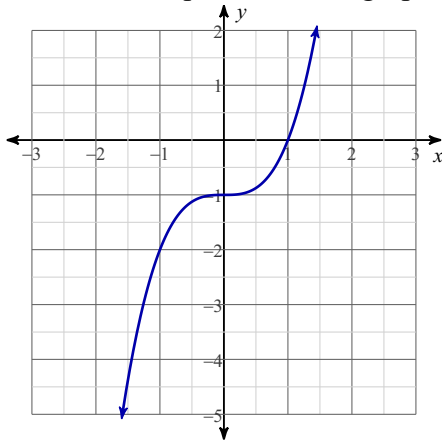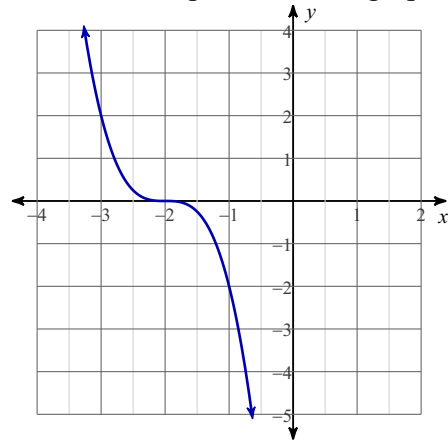
10) What is the equation of the graph?

11) What is the equation of the graph?

12) What is the equation of the graph?

13) What is the equation of the graph?

14) Write an equation for the cube function that has been reflected across the x-axis, vertcially stretched by a factor of 3, shifted left by 2, and up by 4.

15) Write an equation for the cubed root function that has been reflected across the x-axis, vertcially stretched by a factor of 2, shifted right by 4, and up by 1.
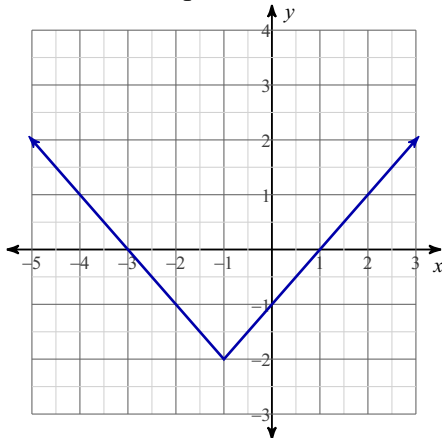
16) What is the equation?
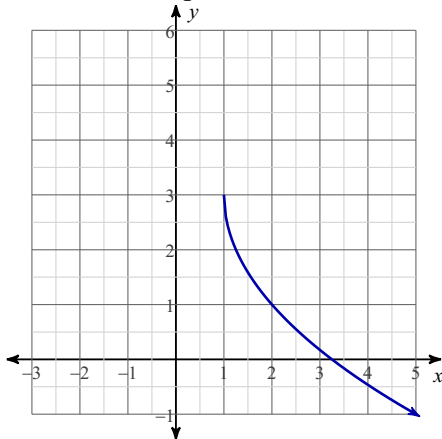
17) What is the equation?
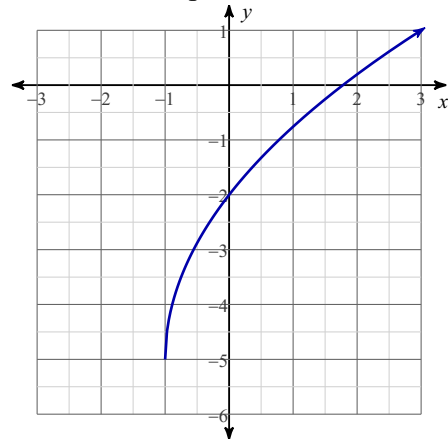
18) What is the equation?

19) What is the equation?

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