

Sketching Curves

Name:

Class:

Date:

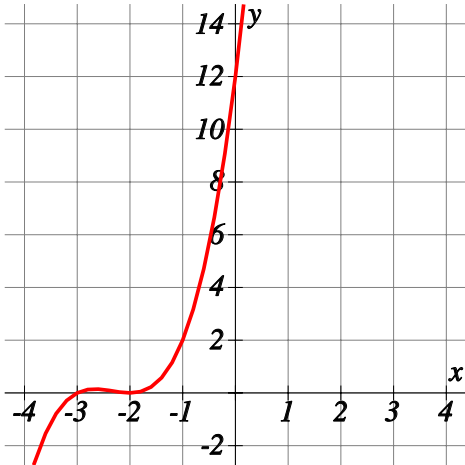
Mark

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1) Find the points of intersection that the curve $y = (x + 2)^2(3 + x)$ has with the axes.

[1]



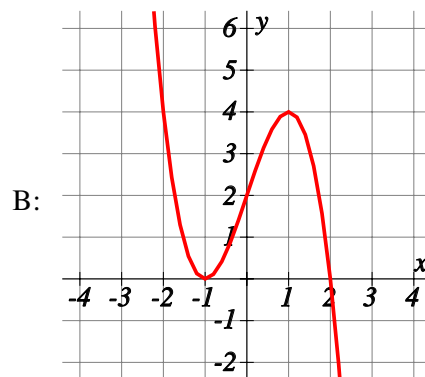
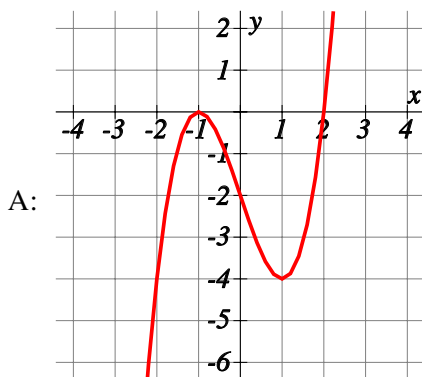
2) Find the points of intersection that the following curve has with the axes.

[1]

$$y = x^3 - 4x^2 + 3x$$

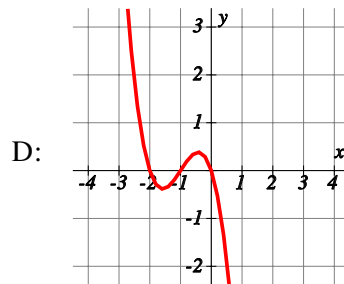
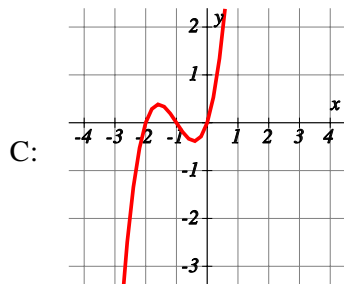
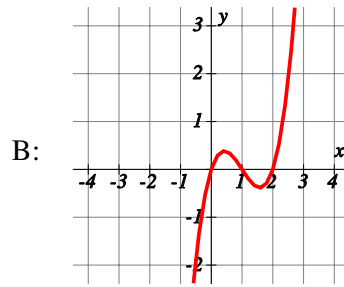
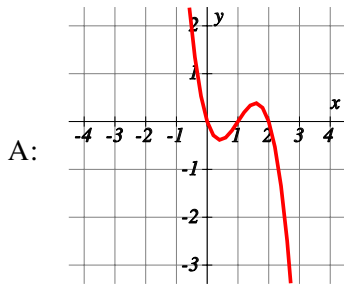
3) Which graph represents the equation $y = (1 + x)^2(2 - x)$.

[1]

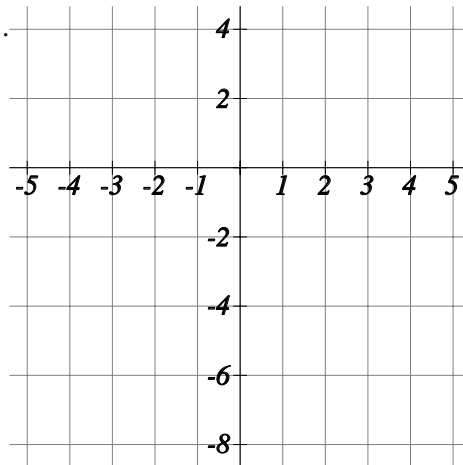


4) Which graph represents the equation $y = -3x^2 + 2x + x^3$.

[1]



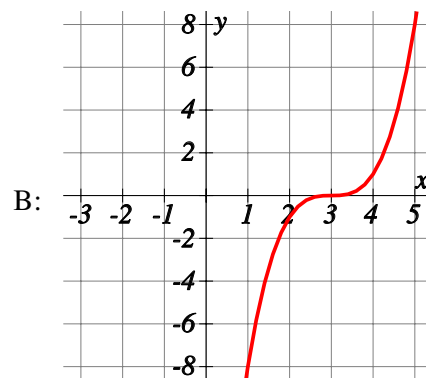
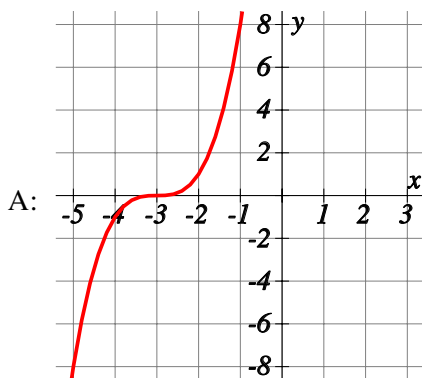
5) Sketch the curve $y = (2 + x)(x - 1)(3 + x)$.



6) Which graph represents the equation $y = (x - 3)^3$.

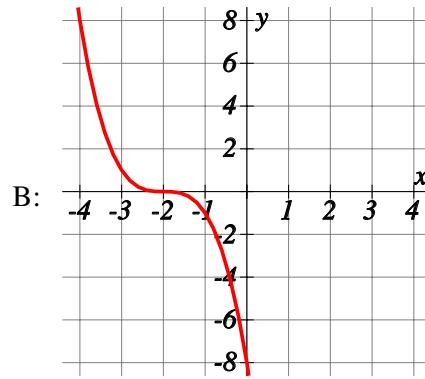
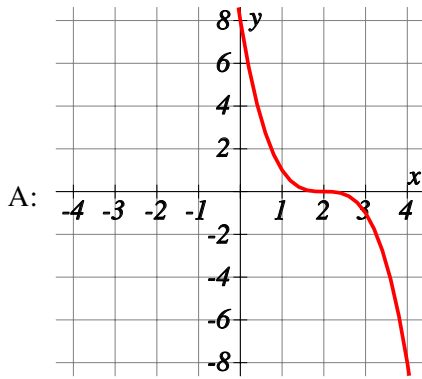
[1]

[1]



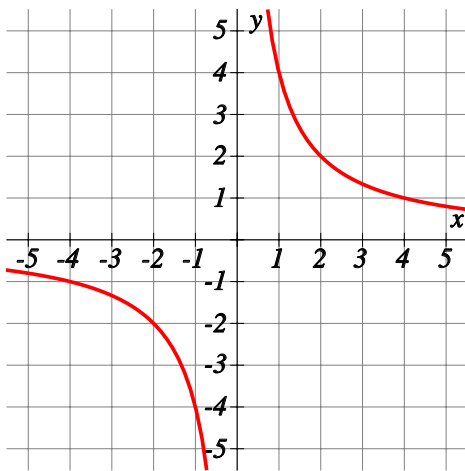
7) Which graph represents the equation $y = -(x + 2)^3$.

[1]



8) Which equation represents the following graph.

[1]



A. $y = -\frac{6}{x}$

B. $y = \frac{8}{x}$

C. $y = \frac{4}{x}$

D. $y = -\frac{2}{x}$

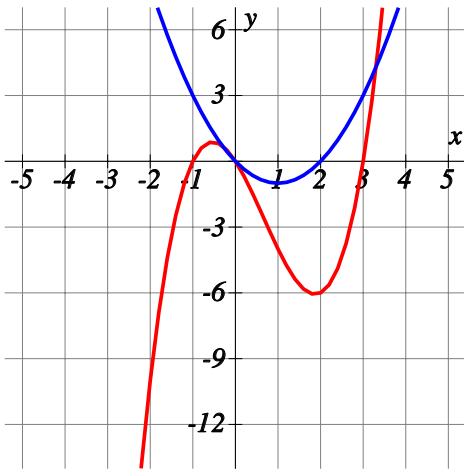
9) Complete the table for the equation $y = \frac{3}{x}$.

[1]

x	-6	-3	-2	1	3	5	7
y							

10) State the number of points of intersection of the curves $y = x(1+x)(-3+x)$ and $y = x(x-2)$.

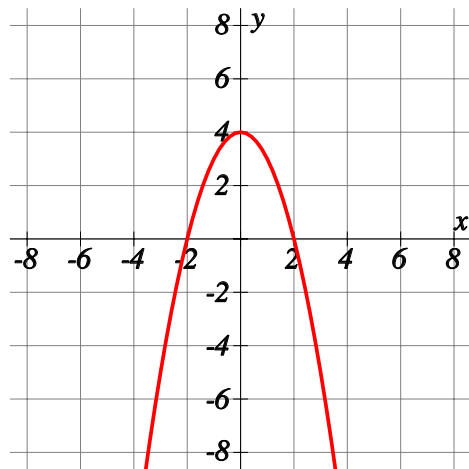
[1]



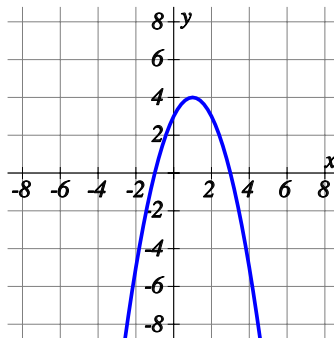
11) Find the coordinates of the points of intersection of the curves $y = x(-3+x)(2+x)$ and $y = x(x+2)$.

[1]

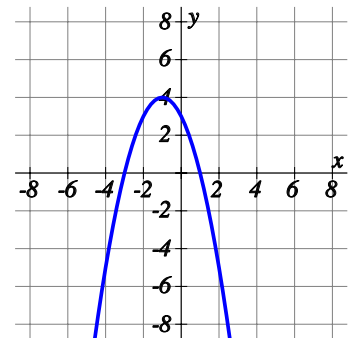
12) The graph of $y = f(x)$ where $f(x) = -x^2 + 4$ is shown below. Which of the following graphs represents a sketch of $f(x+1)$.



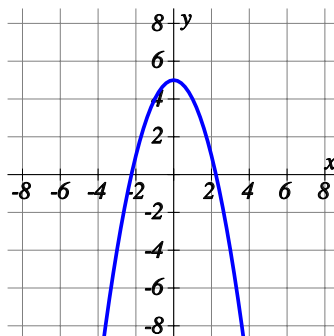
A:



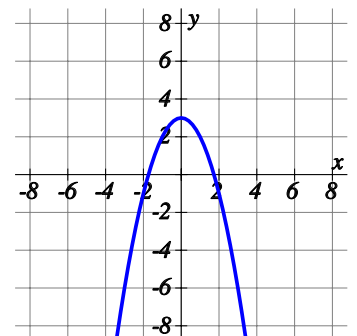
B:



C:

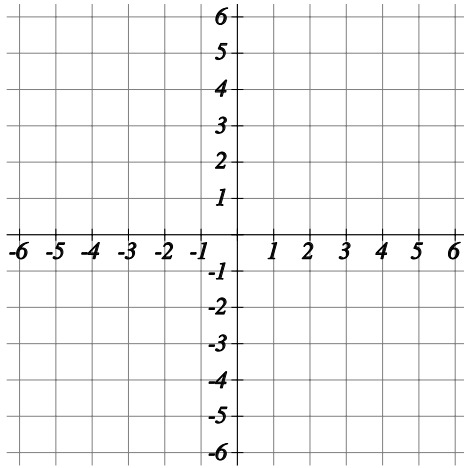
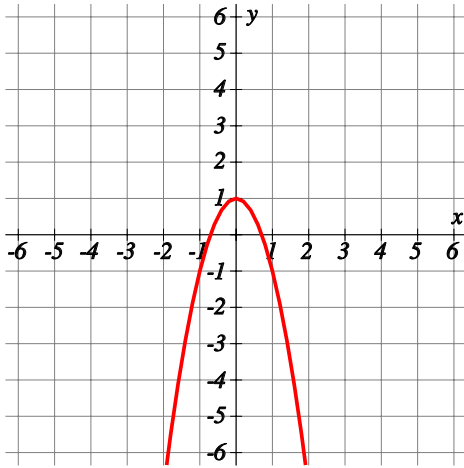


D:

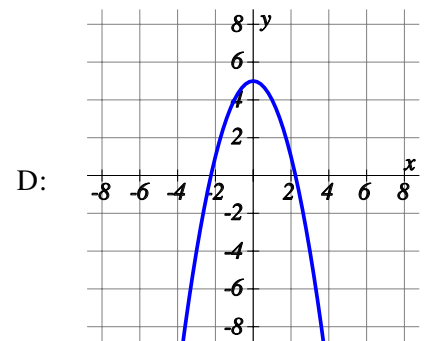
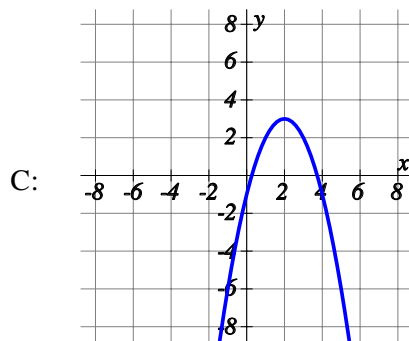
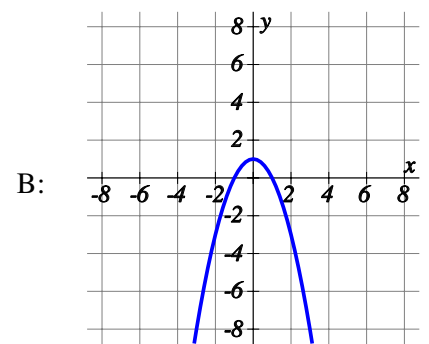
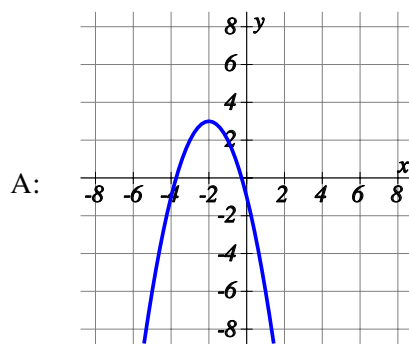
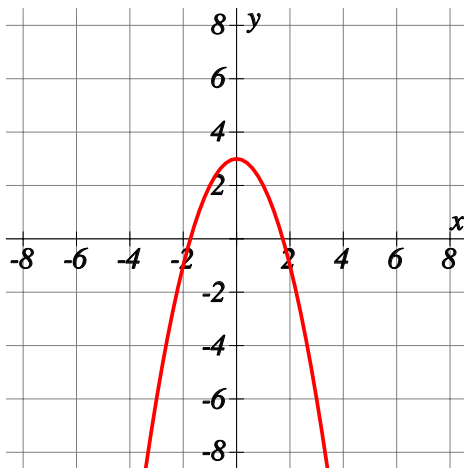


[1]

13) The graph of $y = f(x)$ where $f(x) = -2x^2 + 1$ is shown below. On the other grid, sketch the graph of $f(x + 1)$. [1]

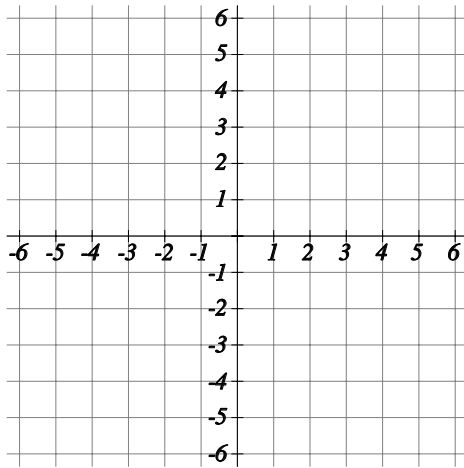
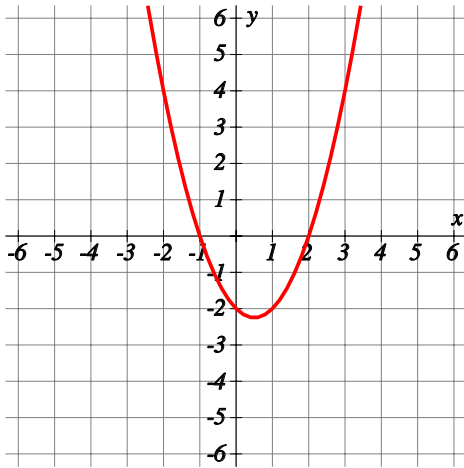


14) The graph of $y = f(x)$ where $f(x) = -x^2 + 3$ is shown below. Which of the following graphs represents a sketch of $f(x) - 2$.



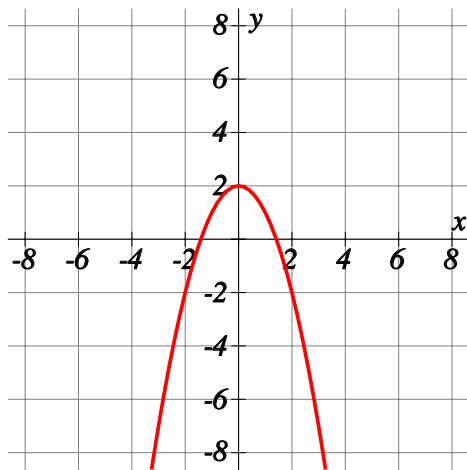
[1]

15) The graph of $y = f(x)$ where $f(x) = (x + 1)(x - 2)$ is shown below. On the other grid, sketch the graph of $f(x) - 1$.

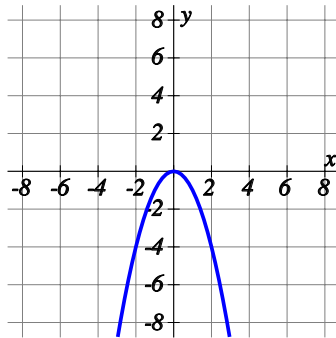


[1]

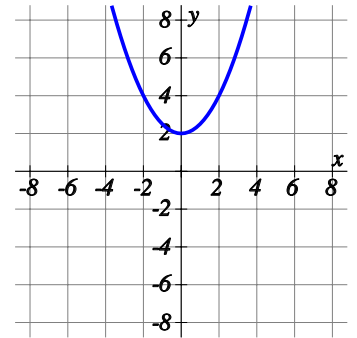
16) The graph of $y = f(x)$ where $f(x) = -x^2 + 2$ is shown below. Which of the following graphs represents a sketch of $f(-2x)$.



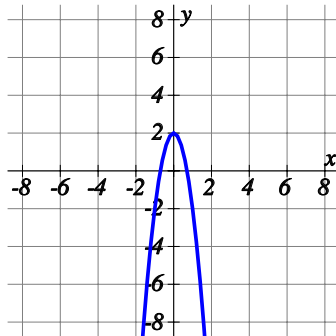
A:



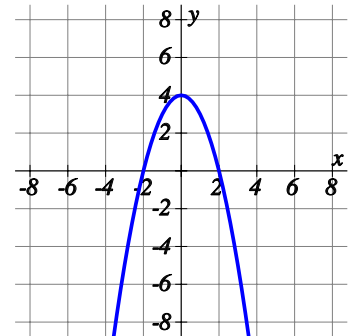
B:



C:

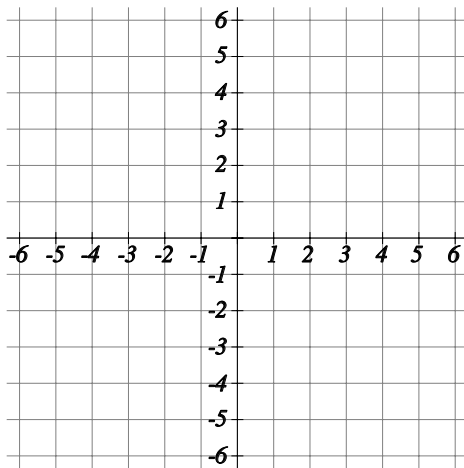
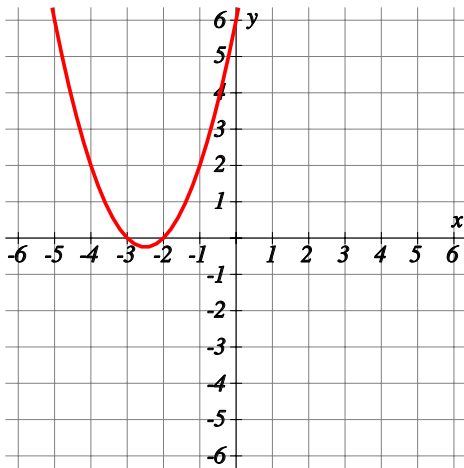


D:

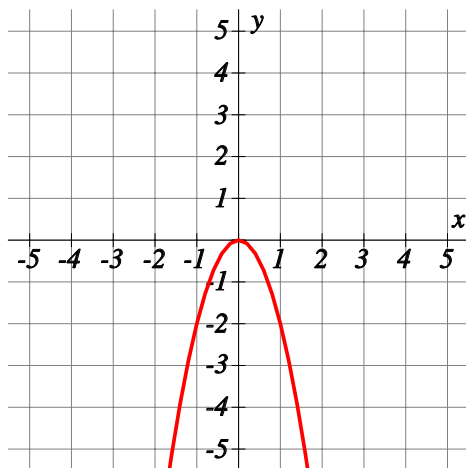


[1]

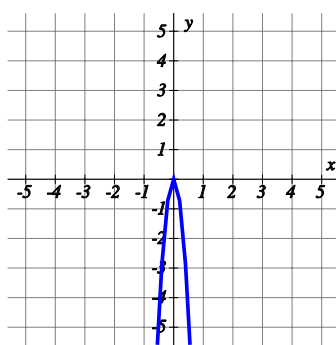
17) The graph of $y = f(x)$ where $f(x) = (x + 2)(x + 3)$ is shown below. On the other grid, sketch the graph of $f(2x)$. [1]



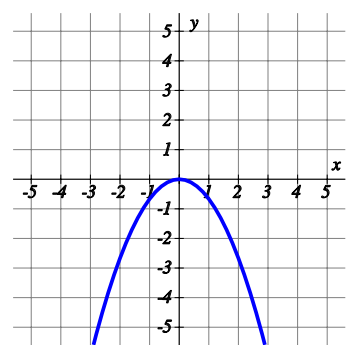
18) The graph of $y = f(x)$ where $f(x) = -2x^2$ is shown below. Which of the following graphs represents a sketch of $3f(x)$.



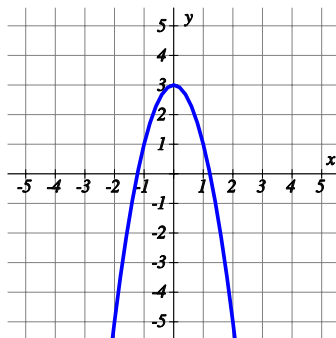
A:



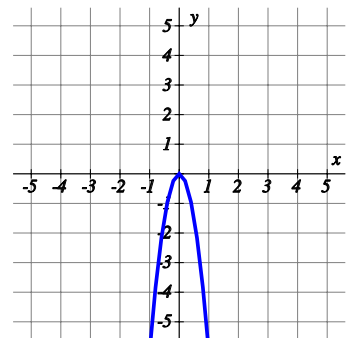
B:



C:

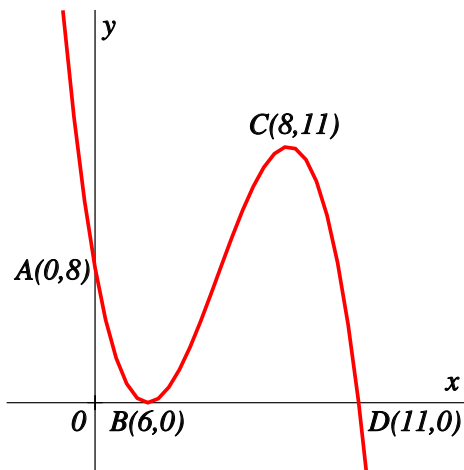


D:



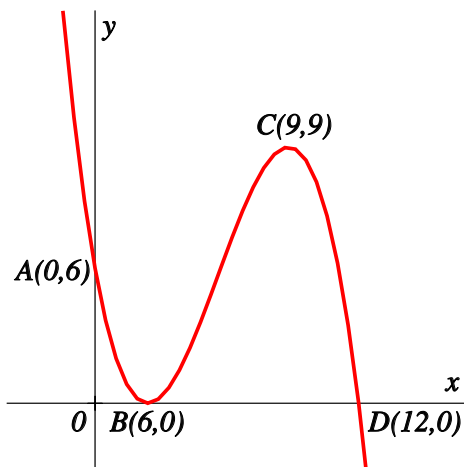
[1]

19) The following diagram shows a sketch of the curve with equation $y = f(x)$. Find the coordinates of A, B, C and D after a transformation of $y = f(x + 1)$.



[1]

20) The following diagram shows a sketch of the curve with equation $y = f(x)$. Find the coordinates of A, B, C and D after a transformation of $y = f(2x)$.



[1]

Solutions for the assessment Sketching Curves

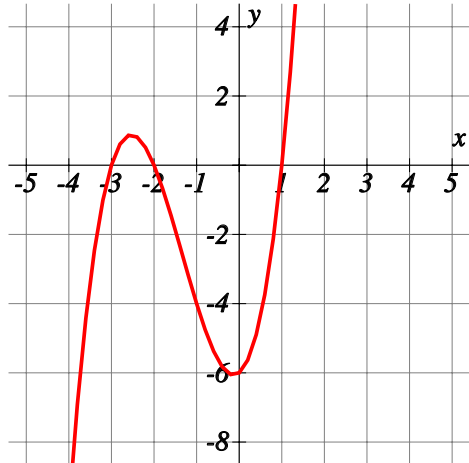
1) $(-2, 0)$, $(-3, 0)$, or $(0, 12)$

2) $(1, 0)$, $(3, 0)$, or $(0, 0)$

3) *B*

4) *B*

5)



6) *B*

7) *B*

8) *C*

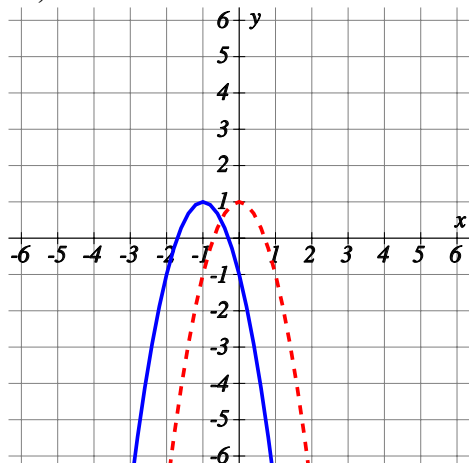
9) -0.5 , -1 , -1.5 , 3 , 1 , 0.6 , 0.429

10) 3

11) $(0, 0)$, $(4, 24)$ or $(-2, 0)$

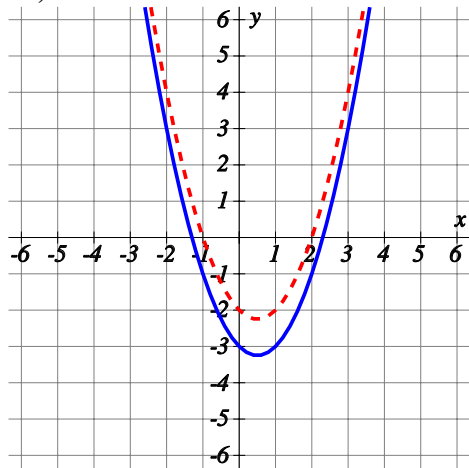
12) *B*

13)



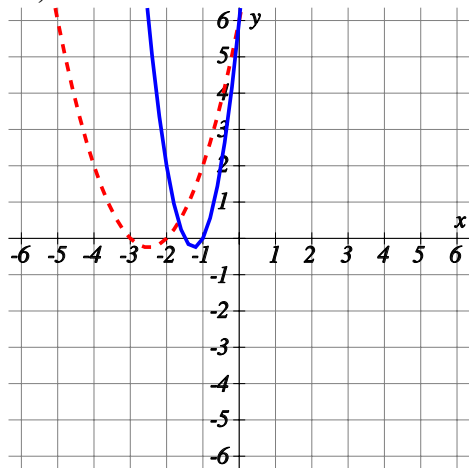
14) *B*

15)



16) C

17)



18) D

19) A(-1, 8), B(5, 0), C(7, 11) or D(10, 0)

20) A(0, 6), B(3, 0), C(4.5, 9) or D(6, 0)