

Name Key
8A; Algebra 1

Date _____
Period _____

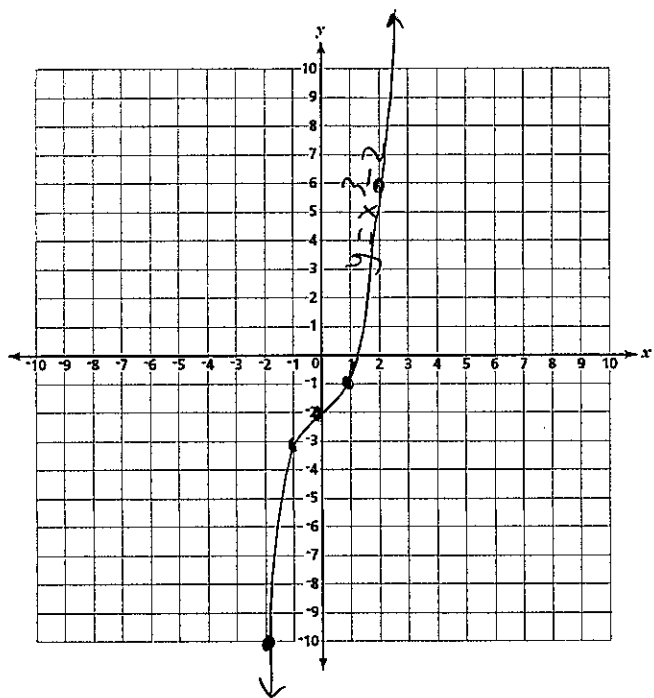
Homework

#'s 1-3: Graph the following cubic functions.

1) $y = x^3 - 2$

- Translated
2 units down

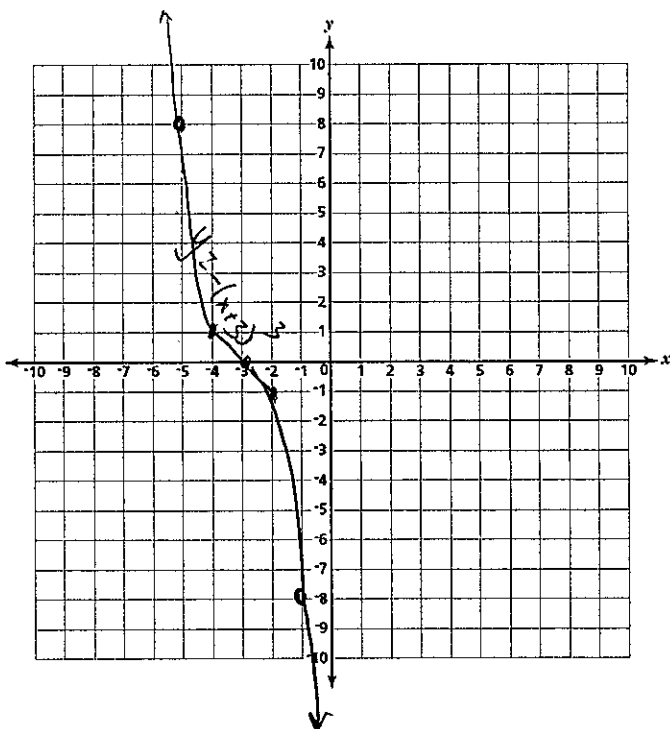
X	Y
-2	-10
-1	-3
0	-2
1	-1
2	6



2) $y = -(x + 3)^3$

- Reflected in the
x-axis
- Translated
3 units left

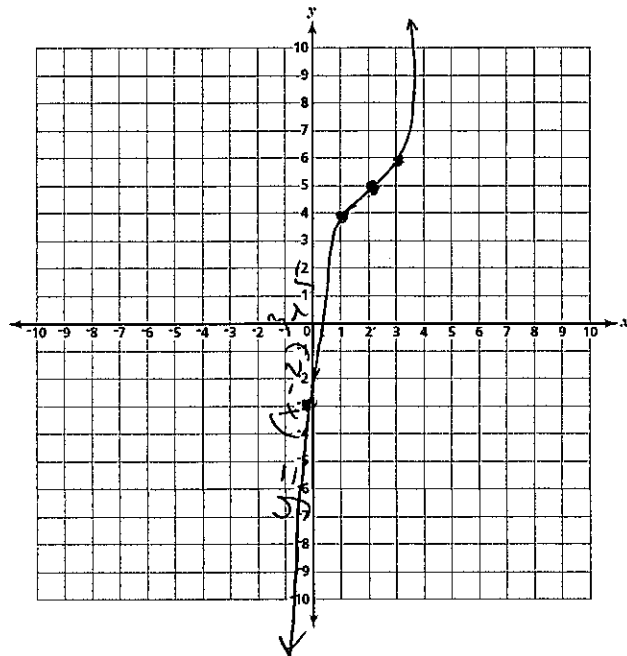
X	Y
-5	8
-4	1
-3	0
-2	-1
-1	-8



3) $y = (x - 2)^3 + 5$

- Translated 2
units right and
5 units up

X	Y
0	-3
1	4
2	5
3	6



#'s 4-5: How would each of the following graphs change in relation to the parent graph?

4) $y = (x + 4)^3$ - Translated 4 units left from (0, 0)

5) $y = x^3 - 6$ - Translated 6 units down from (0, 0)

#'s 6-7: Use the description to write the cubic function.

6) The parent function is translated 4 units right and 6 units down.

$$y = (x - 4)^3 - 6$$

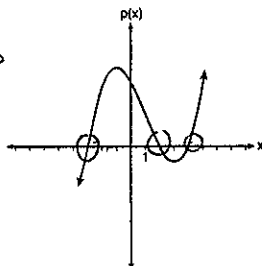
7) The parent function is reflected in the x-axis, wider by a scale factor of $\frac{1}{2}$, & translated 5 units left.

$$y = -\frac{1}{2}(x + 5)^3$$

8)

Based on the graph below, which expression is a possible factorization of $p(x)$?

Work backwards from roots



$$\frac{(x + 3) | (x - 2) | (x - 4) = 0}{x = -3 | x = 2 | x = 4}$$

- 1) $(x + 3)(x - 2)(x - 4)$
- 2) $(x - 3)(x + 2)(x + 4)$

- 3) $(x + 3)(x - 5)(x - 2)(x - 4)$
- 4) $(x - 3)(x + 5)(x + 2)(x + 4)$