Name __Key__   Date _____ Pd ____

## 8.3 Shifting & Reflecting Graphs CYU

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Graphing quadratics	1, 3, 8		
Graphing absolute value	2, 4, 6, 10		
Graphing radicals		5, 7, 9	
Using the calculator to fill t-charts	1 - 10		
Describing transformations	1 - 4	5 - 10	
Domain and range in interval notation	1 – 4, 6, 8, 10	5, 7, 9	

Sketch the graph of each function (you may use a calculator). Fill in the t-chart provided. Plot those points on the graph provided. Describe the transformation from the parent function. Then state the domain and range.
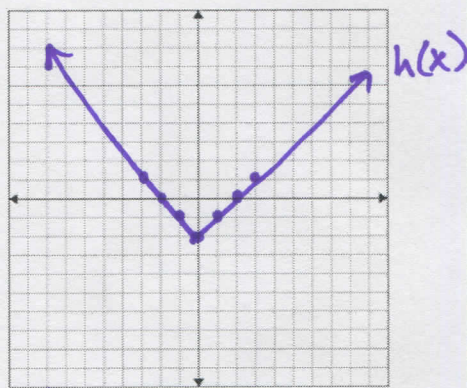
1. $f(x) = x^2 + 4$

x	y
-2	7
-1	5
0	4
1	5
2	7
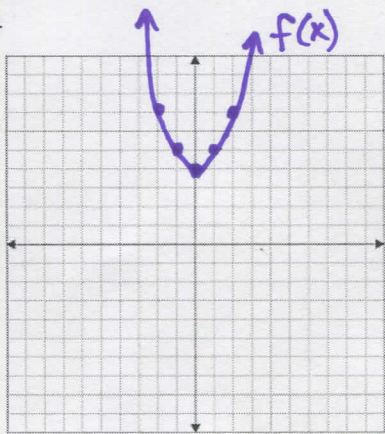
↑4u

D: $(-\infty, \infty)$
R: $[+4, \infty)$

2. $h(x) = |x| - 2$

x	y
-2	0
-1	-1
0	-2
1	-1
2	0

↓2u

D: $(-\infty, \infty)$
R: $[-2, \infty)$

3. $g(x) = (x - 4)^2$

x	y
2	4
3	1
4	0
5	1
6	4
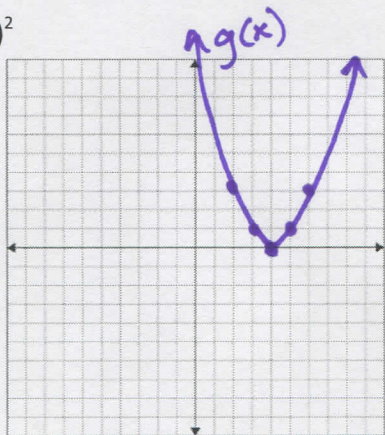
→4u

D: $(-\infty, \infty)$
R: $[0, \infty)$

4. $f(x) = |x + 3|$

x	y
-1	2
-2	1
-3	0
-4	1
-5	2
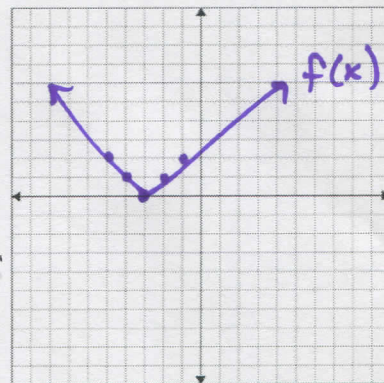
← 3u

D: $(-\infty, \infty)$
R: $[0, \infty)$

5. $f(x) = \sqrt{x+1} + 1$

x	y
-1	1
0	+2
3	3
8	4
15	5

← 1u
↑ 1u
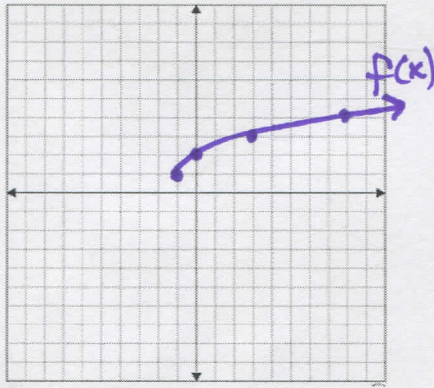
D: [1, ∞)
R: [1, ∞)

6. $j(x) = |x+3| - 1$

x	y
-5	1
-4	0
-3	-1
-2	0
-1	1

← 3u
↓ 1u
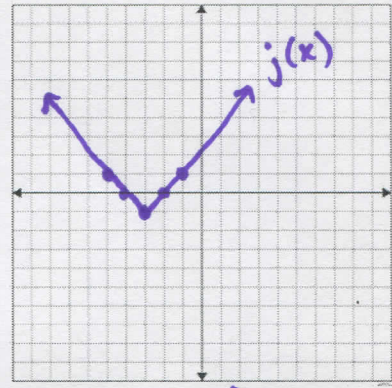
D: (-∞, ∞)
R: [1, ∞)

7. $h(x) = \sqrt{x+3} + 2$

x	y
-3	2
-2	3
1	4
6	5
13	6

← 3u
↑ 2u
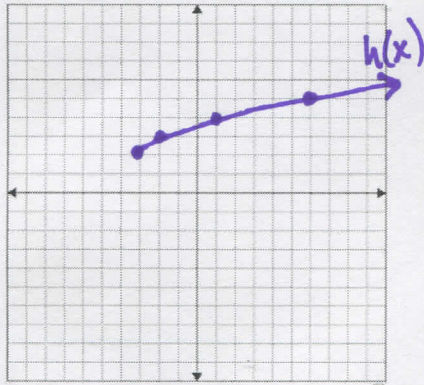
D: [3, ∞)
R: [2, ∞)

8. $g(x) = (x+3)^2 - 2$

x	y
-5	1
-4	-1
-3	-2
-2	-1
-1	1

← 3u
↓ 2u
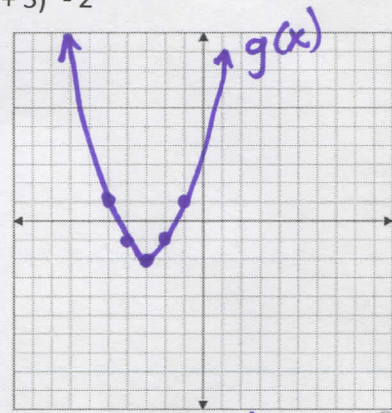
D: (-∞, ∞)
R: [2, ∞)

9. $h(x) = \sqrt{x-2} + 3$

x	y
2	3
3	4
6	5
11	6
18	7

→ 2u
↑ 3u
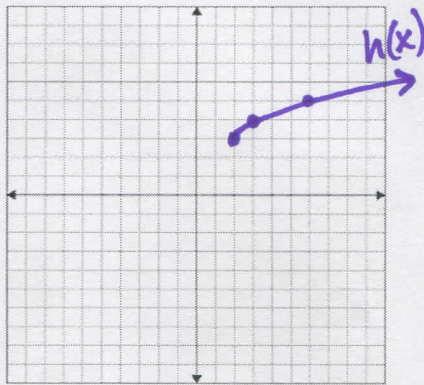
D: [2, ∞)   R: [3, ∞)

10. $g(x) = |x-3| + 2$

x	y
1	4
2	3
3	2
4	3
5	4

→ 3u
↑ 2u
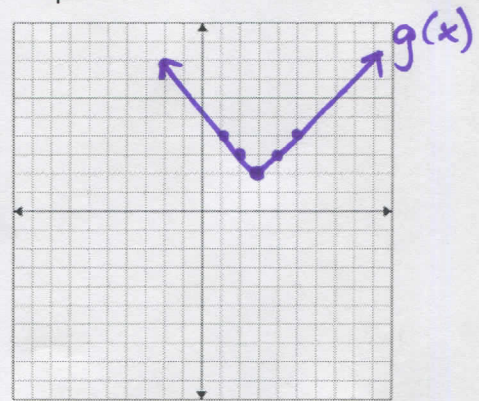
D: (-∞, ∞)   R: [2, ∞)

CYU Reflection: *How far can you go: basic, intermèdiate, or advanced?*
Rate your mastery level!
How confident are you with the skills this CYU covered? Circle the score you would give yourself.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

Basic   Intermediate   Advanced   Solved ALL!