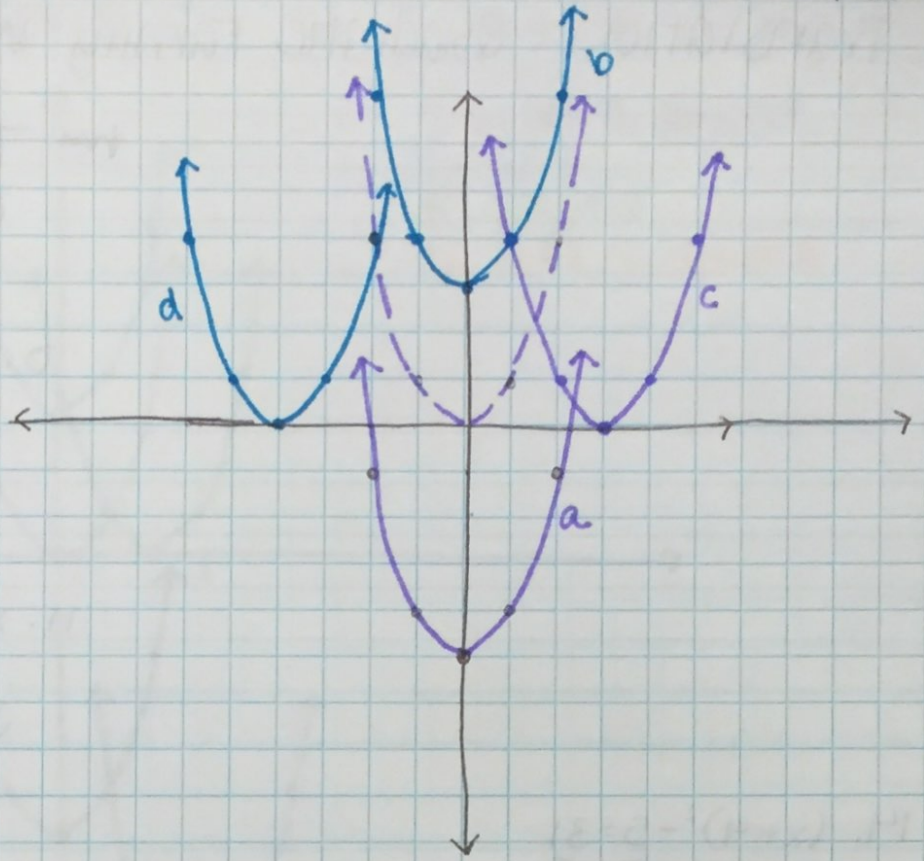


HW19

p 209 # 2-4

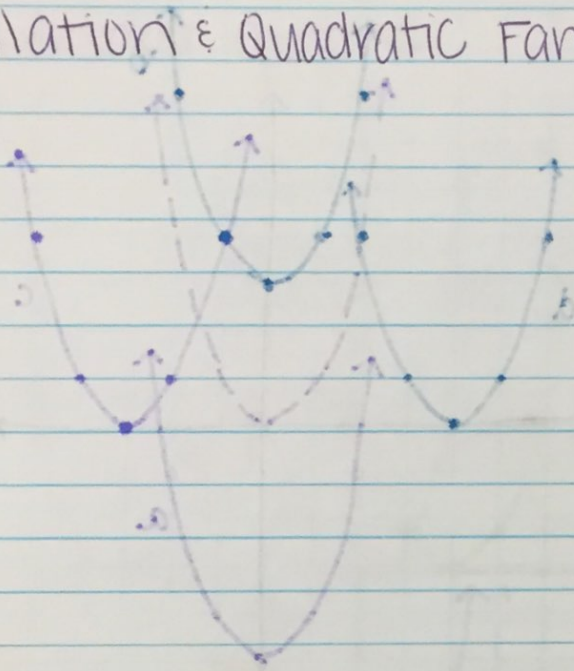
2. a) $y = x^2 - 5$
 b) $y = x^2 + 3$
 c) $y = (x - 3)^2$
 d) $y = (x + 4)^2$



3. a) down 3
 b) up 4
 c) right 2
 d) left 4

4. a) $f(x-3) = (x-3)^2$ ~~left 3~~ right 3
 b) $f(x+3) = (x+3)^2$ left 3
 c) $y - 2 = x^2$
 $y = x^2 + 2$ up 2
 d) $y + 2 = x^2$
 $y = x^2 - 2$ down 2

Translation & Quadratic Family Worksheet



7. $f(x) = (x+3)^2$

8. $f(x) = x^2 + 1$

9. $f(x) = (x-2)^2 - 3$

10. $x^2 + 6 = 31$
 $-6 \quad -6$

$$\sqrt{x^2} = \sqrt{25}$$

$$x = \pm 5$$

11. $x^2 - 12 = 52$
 $+12 \quad +12$

$$\sqrt{x^2} = \sqrt{64}$$

$$x = \pm 8$$

14. $(x+4)^2 - 5 = 31$
 $+5 \quad +5$

$$\sqrt{(x+4)^2} = \sqrt{36}$$

$$x+4 = \pm 6$$

$$x = -4 \pm 6$$

$$x = -4 + 6 = 2$$

$$x = -4 - 6 = -10$$

12. $\sqrt{(x-3)^2} = \sqrt{100}$

$$x-3 = \pm 10$$

$$x = 3 \pm 10$$

$$x = 3 + 10 = 13$$

$$x = 3 - 10 = -7$$

15. $13 + (x-5)^2 = -3$
 $-13 \quad -13$

$$(x-5)^2 = -16$$

not possible

13. $\sqrt{(x+7)^2} = \sqrt{144}$

$$x+7 = \pm 12$$

$$x = -7 \pm 12$$

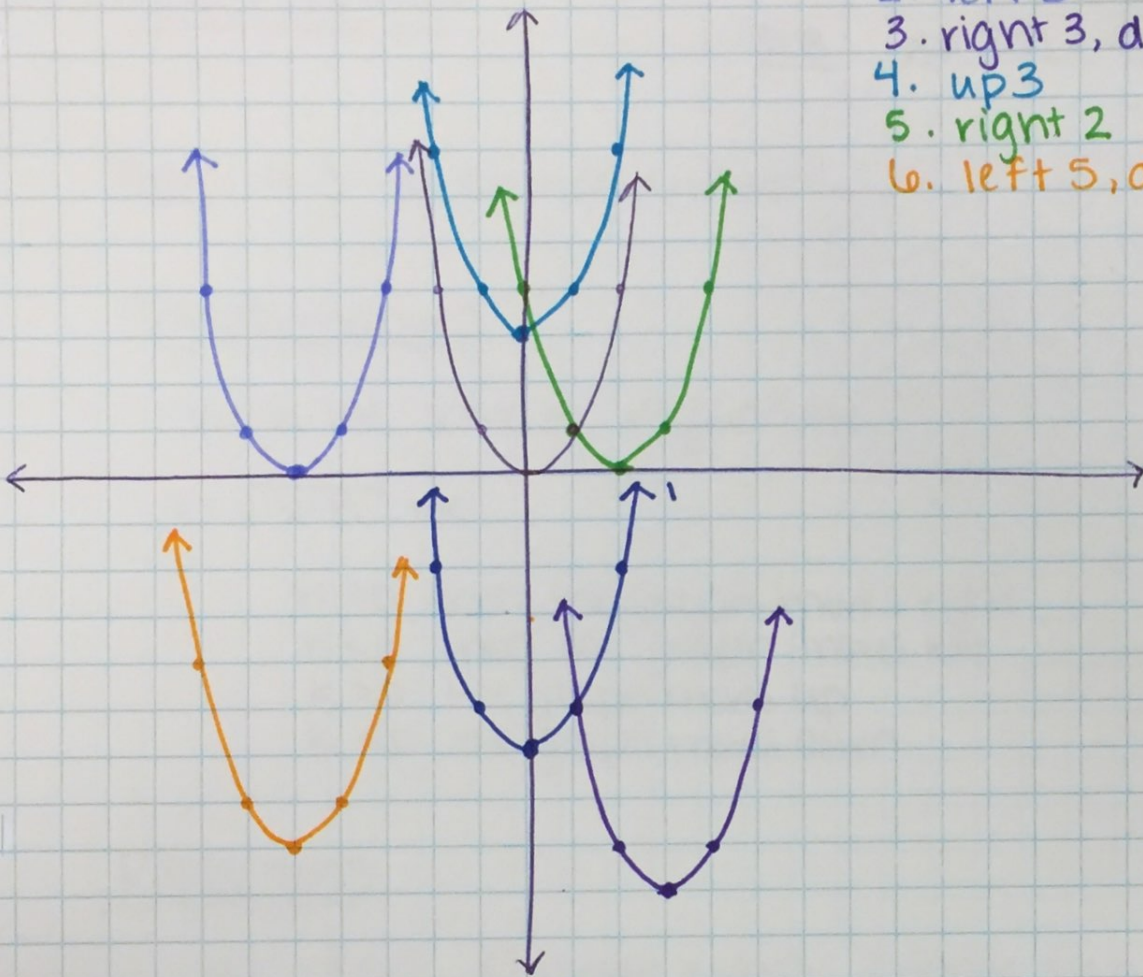
$$x = -7 + 12 = 5$$

$$x = -7 - 12 = -19$$

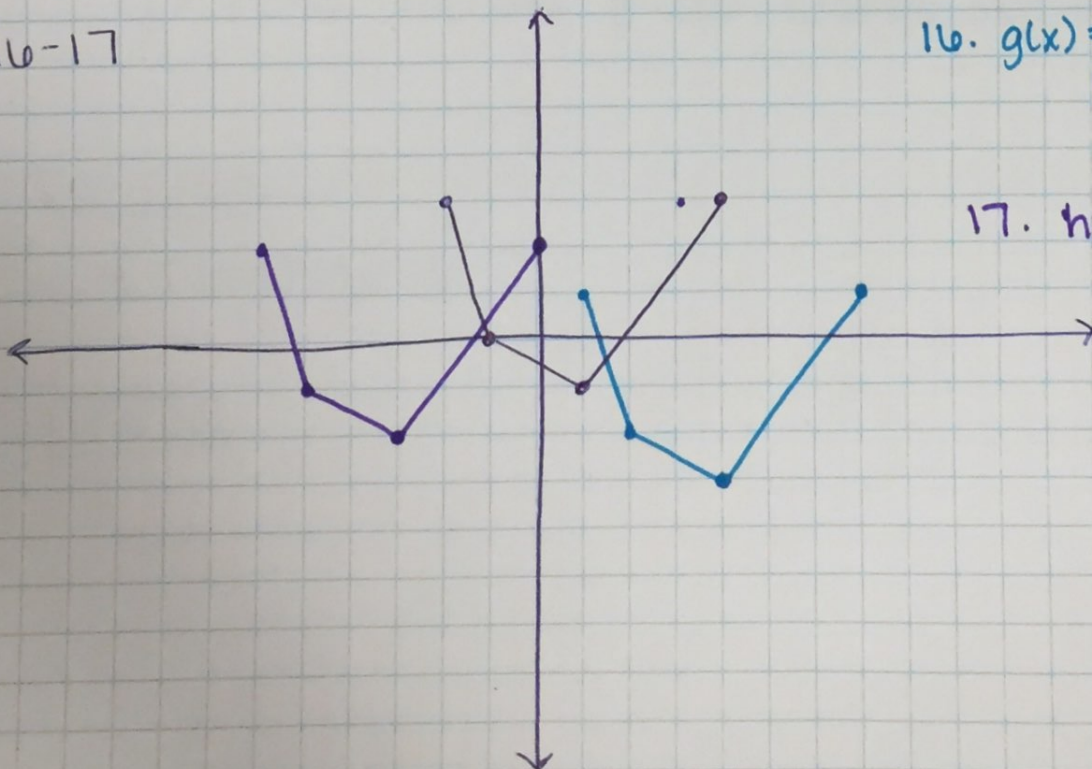
see next page for
 #1-6 & #16-17

Worksheet graphs

1. down 6
2. left 5
3. right 3, down 9
4. up 3
5. right 2
6. left 5, down 8



16-17



16. $g(x) = f(x-3) - 2$
right 3,
down 2

17. $h(x) = -1 + f(x+4)$
left 4
down 1