LG 5/6 QUADRATIC FUNCTIONS **WORKSHEET #1** Name _____

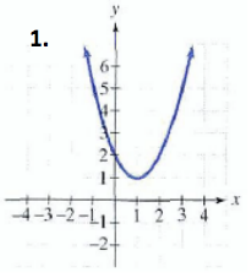
Match the following equations to the graphs below.

A. $a(x) = (x+1)^2 - 1$ **B.** $b(x) = -x^2 - 1$ **C.** $c(x) = (x-1)^2 + 1$

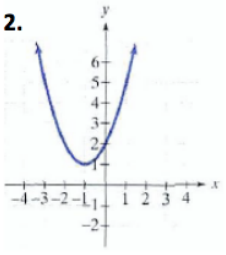
D. $d(x) = x^2 - 2x + 1$ **E.** $e(x) = x^2 + 2x + 1$ **F.** $f(x) = (x+1)^2 + 1$

G. $g(x) = (x-1)^2 - 1$ **H.** $h(x) = x^2 - 1$

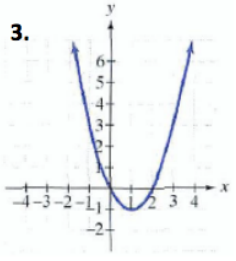
1.



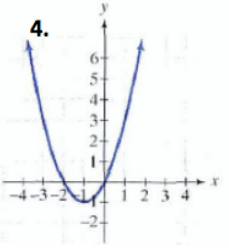
2.



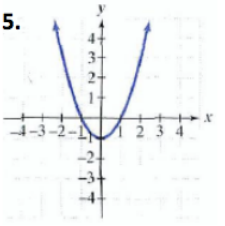
3.



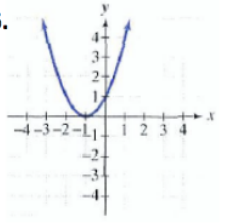
4.



5.

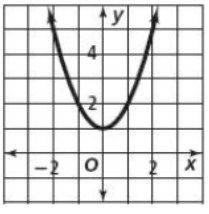


6.

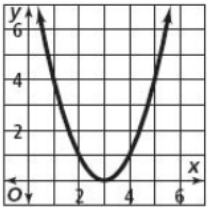


Identify the vertex and the axis of symmetry of each parabola.

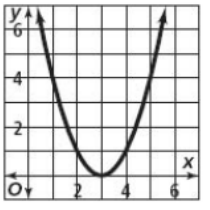
7.



8.



9.



Determine whether each function is linear or quadratic. Identify the quadratic, linear, and constant terms.

10. $y = (x-2)(x+4)$ 11. $y = 3x(x+5)$ 12. $y = 5x(x-5) - 5x^2$

13. $f(x) = 7(x-2) + 5(3x)$ 14. $f(x) = 3x^2 - (4x-8)$ 15. $y = 3x(x-1) - (3x+7)$

16. $y = 3x^2 - 12$ 17. $f(x) = (2x-3)(x+2)$ 18. $y = 3x - 5$

ANSWERS:

1. C 2. F 3. G 4. A 5. H 6. E
7. $(0, 1); x = 0$ **8.** $(3, 0); x = 3$ **9.** $(-1, -2); x = -1$
10. quadratic; quad: x^2; lin: $2x$; const: -8 **11.** quadratic; quad: $3x^2$; lin: $15x$; const: none **12.** linear; quad: none; lin: $-25x$; const: none **13.** linear; quad: none; lin: $22x$; const: -14 **14.** quadratic; quad: $3x^2$; lin: $-4x$; const: 8
15. quadratic; quad: $3x^2$; lin: $-6x$; const: -7
16. quadratic; quad: $3x^2$; lin: none; const: -12 **17.** quadratic; quad: $2x^2$; lin: x; const: -6 **18.** linear; quad: none; lin: $3x$; const: -5