Lesson 6

READY, SET, GO! Name Period Date

READY

Topic: Taking the square root of perfect squares.

Only some of the expressions inside the radical sign are perfect squares. Identify which ones are perfect squares and take the square root. Leave the ones that are not perfect squares under the radical sign. Do not attempt to simplify them. (Hint: Check your answers by squaring them. You should be able to get what you started with, if you are right.)

1. $\sqrt{(17xyz)^2}$ $|17xyz|$
2. $\sqrt{(3x-7)^2}$ $|3x-7|$
3. $\sqrt{121a^2b^6}$ $11|a||b^3|$
4. $\sqrt{x^2+8x+16}$ $\sqrt{(x+4)^2}$ $|x+4|$
5. $\sqrt{x^2+14x+49}$ $\sqrt{(x+7)^2}$ $|x+7|$
6. $\sqrt{x^2+14x-49}$ not a perfect square
7. $\sqrt{x^2+10x+100}$ not a perfect square
8. $\sqrt{x^2+20x+100}$ $\sqrt{(x+10)^2}$ $|x+10|$
9. $\sqrt{x^2-20x+100}$ $\sqrt{(x-10)^2}$ $|x-10|$

SET

Topic: Factoring Quadratics

The area of a rectangle is given in the form of a trinomial expression. Find the equivalent expression that shows the lengths of the two sides of the rectangles.

10. x^2+9x+8 $(x+1)(x+8)$
11. x^2-6x+8 $(x-2)(x-4)$
12. x^2-2x-8 $(x-4)(x+2)$
13. x^2+7x-8 $(x+8)(x-1)$
14. $x^2-11x+24$ $(x-8)(x-3)$
15. $x^2-14x+24$ $(x-12)(x-2)$
16. $x^2-25x+24$ $(x-24)(x-1)$
17. $x^2-10x+24$ $(x-6)(x-4)$
18. $x^2-2x-24$ $(x-6)(x+4)$
19. $x^2-5x-24$ $(x-8)(x+3)$
20. $x^2+5x-24$ $(x+8)(x-3)$
21. $x^2-10x+25$ prime
22. x^2-25 $(x+5)(x-5)$
23. $x^2-2x-15$ $(x-5)(x+3)$
24. $x^2+10x-75$ $(x+15)(x-5)$
25. $x^2-20x+51$ $(x-17)(x-3)$
26. $x^2+14x-32$ $(x+16)(x-2)$
27. x^2-1 $(x+1)(x-1)$
28. x^2-2x+1 $(x-1)(x-1)$ $(x-1)^2$
29. $x^2+12x-45$ $(x+15)(x-3)$

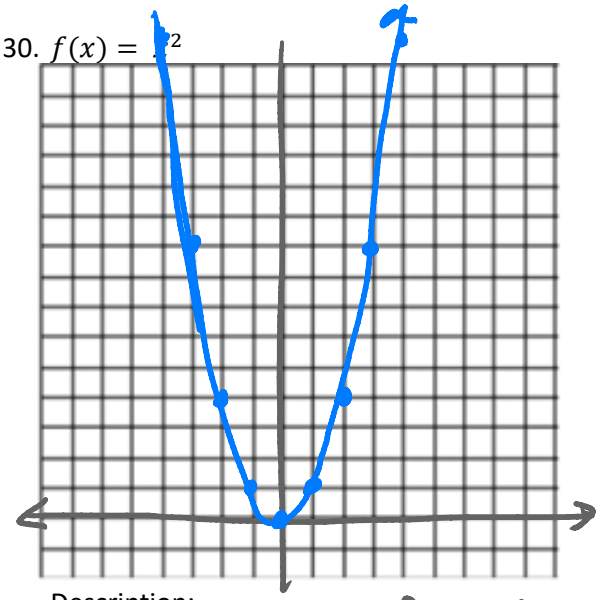
Lesson 6

GO

Topic: Graphing Parabolas

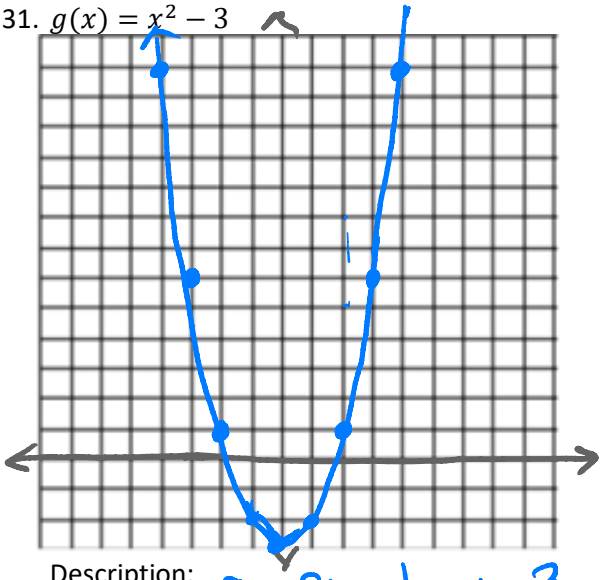
Graph each parabola. Including the vertex and at least 3 accurate points on each side of the axis of symmetry. Then. Describe the transformation in words.

30. $f(x) = x^2$



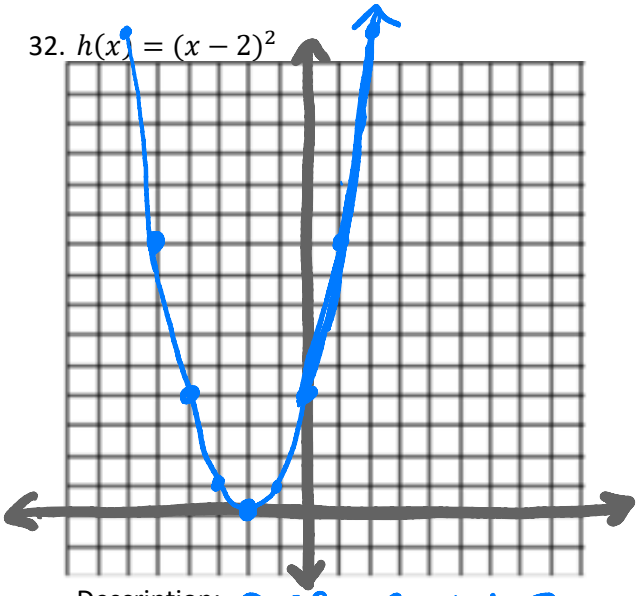
Description: parent function

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



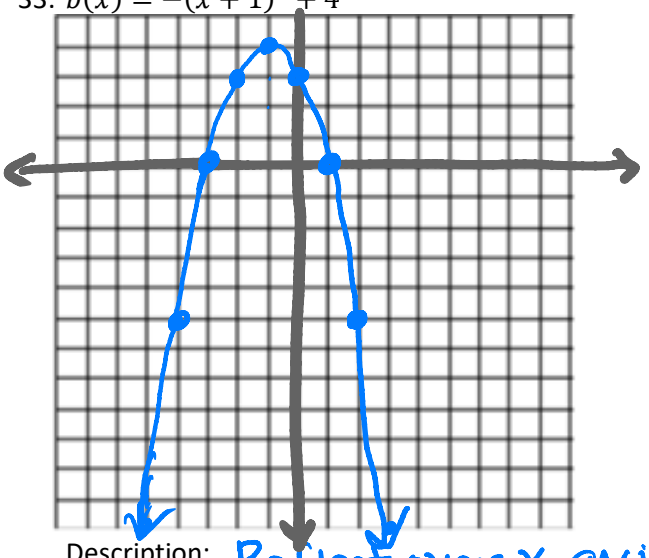
Description: Shift down 3.

32. $h(x) = (x-2)^2$



Description: Shift Right 3

33. $b(x) = -(x+1)^2 + 4$



Description: Reflect over x-axis
shift left 1, up 4