4.2 Re-Teach Worksheet

Intermediate Algebra

Name Key

Learning Target: *I can translate quadratic equations from factored and vertex form INTO standard form.*

Level 1

Multiply

1. $3x(4x-7)$ $12x^2-21x$

2. $-9x^2(3x^3+7x-2)$ $-27x^5-63x^3+18x^2$

3. $4y(-y^3+2y-1)$ $-4y^4+8y^2-4y$

4. $(2x+1)(x-3)$ $2x^2-6x+x-3$ $2x^2-5x-3$

Write each equation in standard form.

5. $y=(x+2)(x-3)$ $x^2-3x+2x-6$ x^2-x-6

6. $y=-2(x-5)(x-4)$ $y=-2(x^2-4x-5x+20)$ $y=-2(x^2-9x+20)$ $y=-2x^2-18x+40$

7. $y=(4b-3)(b-7)$ $y=4b^2-28b-3b+21$ $y=4b^2-31b+21$

8. $y=(3x-1)(4x+9)$ $y=12x^2+27x-4x-9$ $y=12x^2+23x-9$

9. $y=(2x-5)^2$ $(2x-5)(2x-5)$ $4x^2-10x-10x+25$ $4x^2-20x+25$

10. $y=(x+10)^2$ $(x+10)^2$ $(x+10)(x+10)$ $x^2+10x+10x+100$ $x^2+20x+100$

11. $y=(6x+1)^2$ $(6x+1)(6x+1)$ $36x^2+6x+6x+1$ $36x^2+12x+1$

12. $y=(4x-7)^2$ $(4x-7)(4x-7)$ $16x^2-28x-28x+49$ $16x^2-56x+49$

13. $y=3(x-4)^2+7$ $3(x-4)(x-4)+7$ $3(x^2-4x-4x+16)+7$ $3(x^2-8x+16)+7$ $3x^2-24x+48+7$ $3x^2-24x+41$

14. $y=-2(x+2)^2-11$ $-2(x+2)(x+2)-11$ $-2(x^2+2x+2x+4)-11$ $-2(x^2+4x+4)-11$ $-2x^2-8x-8-11$ $-2x^2-8-19$

15. $y=-(x-10)^2-1$ $-1(x-10)(x-10)-1$ $-1(x^2-10x-10x+100)-1$ $-1(x^2-20x+100)-1$ $-x^2+20x-100-1$ $-x^2+20x-101$

16. $y=(x+1)^2+15$ $(x+1)(x+1)+15$ $(x^2+x+x+1)+15$ $x^2+2x+1+15$ $x^2+2x+16$

4.2 Re-Teach Worksheet

Name Key

Intermediate Algebra

Level 2

Find the x-intercepts of each function.

17. $y = (x - 5)(x + 9)$

$x = 5, -9$

18. $y = (2x + 11)(x - 8)$

$2x+11=0 \quad x-8=0$

$x = \frac{-11}{2} \quad x = 8$

19. $y = (5x + 8)(6x - 1)$

$5x+8=0 \quad 6x-1=0$

$x = \frac{-8}{5} \quad x = \frac{1}{6}$

Given the following x-intercepts, write a quadratic function in standard form.

20. (3, 0) (-7, 0)

$y = (x-3)(x+7)$

$x^2+7x-3x-21$

$y = x^2+4x-21$

21. (-6, 0) (-4, 0)

$y = (x+6)(x+4)$

$y = x^2+4x+6x+24$

$y = x^2+10x+24$

22. (9, 0) $(\frac{1}{2}, 0)$

~~$(x+9)(2x+1)$~~

$(x-9)(2x-1)$

$2x^2-x-18x+9$

$2x^2-19x+9$

Error Analysis

Describe all the errors in each problem below.

23.

$y = (x+5)^2$

$y = x^2+5^2$

$y = x^2+25$

did not write $(x+5)(x+5)$

24.

$y = (2x+4)(x+6)$

$y = x^2+6x+4x+24$

$y = x^2+10x+24$

$2x \cdot x = 2x^2$

25.

$y = -3x^2(-x^4+2x^3-6x)$

$y = 3x^8-5x^5-18x^2$

$-3x^2(-x^4) = -3x^6$