Homework review - p. 578

#24 $12a^5 + 8a$

$4a^1(3a^4 + 2)$

$\frac{a^5}{a^1} = a^4$

Zero-product property: $a \cdot b$

$a \cdot b = 0$

either $a = 0$

$b = 0$

$a = b = 0$

(28) $5w^2 - 5w = 0$

$5w(w-1) = 0$

a b

either $a = 0$ OR $b = 0$

$\frac{5w}{5} = \frac{0}{5}$

$w = 0$

$w - 1 = 0$

$+1 \quad +1$

$w = 1$

$w = 0$ or $w = 1$

(37) $28m^2 = -8m$

$+8m \quad +8m$

$28m^2 + 8m = 0$

$4m(7m+2) = 0$

$0, -\frac{2}{7}$

$4m = 0$

$m = 0$

$7m + 2 = 0$

$7m = -2$

$m = -\frac{2}{7}$

$$x^2 + 3x - 18 = 0$$

$$(x + 6)(x - 3) = 0$$

$x + 6 = 0$ $\qquad$ $x - 3 = 0$

$x = -6$ $\qquad$ $x = 3$

$(-6)^2 + 3(-6) - 18$

$\checkmark 36 - 18 - 18 = 0 \checkmark$

$3^2 + 3(3) - 18 = 0$

$\checkmark 9 + 9 - 18 = 0 \checkmark$

Solve the equation.

1 36
2 18
3 12
4 9

10. $y^2 + 17y + 72 = 0$

$(x+8)(x+9)$

$x+8=0 \qquad x+9=0$

$x=-8$ or $x=-9$

11. $a^2 - 9a - 36 = 0$

$(x+3)(x-12)$

$x=-3 \qquad x=12$

12. $w^2 - 13w + 42 = 0$

$(w-6)(w-7)$

$w=6 \qquad w=7$

13. $m^2 - 5m - 14 = 0$

14. $x^2 + 11x + 24 = 0$

15. $n^2 - 12n + 27 = 0$

Finding the zero of a function:

Solve the equation for $y = 0$

$$f(x) = x^2 + 12x + 32$$

$$y = x^2 + 12x + 32$$

$$0 = x^2 + 12x + 32$$

- p. 586: 30-38 (even)
- break
- quiz

$(x-15)(x+10)$

Find the zeros of the polynomial function.

16. $f(x) = x^2 + 30x + 225$

$x=-15$

17. $h(x) = x^2 - 5x - 150$

$x=15 \quad x=-10$

18. $g(x) = x^2 - 13x + 30$

$x=3 \quad x=10$

$(x-30)(x+20)$

19. $g(x) = x^2 - 10x - 600$

$x=+30 \quad x=-20$

20. $f(x) = x^2 + 16x + 28$

$x=-14 \quad x=-2$

21. $f(x) = x^2 + 13x + 40$

$x=-5 \quad x=-8$

1	150	1	-150
-2	75	2	-75
-3	50	3	-50
-5	30	5	-30
-6	25	6	-25
10	15	10	-15

$(x+10)(x-15)=0$

$x+10=0 \quad x-15=0$

$x=-10 \quad x=15$

Homework:

p. 586, #20-28

589, #67-81 (odd)