Math 1010

10/5/2012 · Chapter 6 Review

Factoring Practice

#14

$$12a^4b - 27b^3$$

$$3b(4a^4 - 9b^2)$$

$$3b(2^2(a^2)^2 - 3^2b^2)$$

$$\boxed{3b(2a^2+3b)(2a^2-3b)}$$

$$(a^m)^n = a^{mn}$$

$$a^{16}$$

$$a^{8\cdot 2}$$

$$(a^8)^2$$

#18 $r^3 + r^2 + 3r + 3$

$$r^2(r+1) + 3(r+1)$$

$$\boxed{(r+1)(r^2+3)}$$

#27 $112x^7y^8 + 32x^4y^6 - 160x^2y^4$

$$\boxed{16x^2y^4(7x^5y^4 + 2x^2y^2 - 10)}$$

$$(\#x^2y^2+\#)(\#x^2y^2-\#)$$

#23 $8a^3 - 27b^3$

$2^3a^3 - 3^3b^3$

$(2a-3b)((2a)^2 + (2a)(3b) + (3b)^2)$

$(2a-3b)(4a^2 + 6ab + 9b^2)$

Ex: $(4x-6)(x+9)$

$2(2x-3)(x+9)$

$5^3 = 125$

$4^3 = 64 = 8^2$

$8^3 = 512$

$7^3 = 343$

$10^3 = 1000$

$2^3 = 8$

$3^3 = 27$

$1^3 = 1 = 1^2$

$5^4 = 25^2 = 625$

$x^2 + 6x + 9$

3, 3

$(x+3)(x+3)$

$(x+3)^2$

9	6
3, 3	6 ✓

$x^2 + 6x + 9 - 25y^2$

$(x+3)^2 - 25y^2$

$[(x+3) + 5y][(x+3) - 5y]$

$(x+3+5y)(x+3-5y)$

Pg 357

#52

$A = 2400$ | w

$\ell = 20 + w$

$A = \ell \cdot w$

$2400 = (w + 20)w$

$2400 = w^2 + 20w$

$-2400 \quad -2400$

$0 = w^2 + 20w - 2400$

-2400	20
$40, -60$	-20
$-40, 60$	20

$\frac{-40}{1}, \frac{60}{1}$

$0 = (w - 40)(w + 60)$

$w - 40 = 0 \quad w + 60 = 0$

$+40 \quad +40 \quad -60 \quad -60$

$w = 40 \quad \cancel{w = -60}$

$w = 40$

$\ell = 20 + 40 = 60$

40 ft by 60 ft