Homework Review p. 572

(38) $(\quad x \quad) = x^2 - 121$

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

$(x - 11)(x + 11)$

(14) $(3x-1)(3x+1) =$

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

$a = 3x$ $\quad a^2 = (3x)^2 = 3^2x^2 = 9x^2$

$b = 1$ $\quad b^2 = 1^2 = 1$

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

(10) $(2d-10)^2 = 4d^2 - 20d + 100$

$(a-b)^2 = a^2 - 2ab + b^2$

$a = 2d$

$b = 10$

$(2d)^2 - 2(2d)(10) + 10^2$

$4d^2 - 40d + 100$

28 32

$(30-2)(30+2) = 30^2 - 2^2$

$900 - 4 = 896$

(22) 44^2

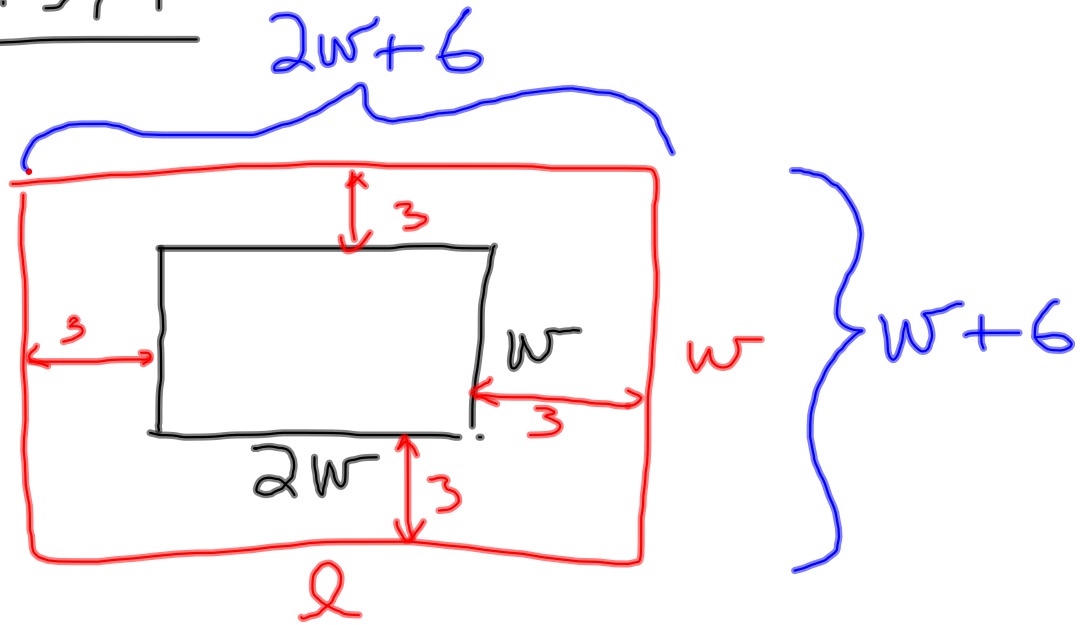
$(40+4)^2 = a^2+2ab+b^2$

$= 40^2+2(4)(40)+4^2$

$=1600+320+16$

$=\underline{1936}$

#9 p. 574



$A = l \times w$

$= (2w+6)(w+6)$

$= 2w^2 + 12w + 6w + 36$

$= 2w^2 + 18w + 36$

p. 574 #7

$(5w+9z)^2 = a^2 + 2ab + b^2$

$a = 5w$

$b = 9z$

$(5w)^2 + 2(5w)(9z) + (9z)^2$

$25w^2 + 90wz + 81z^2$

#1 p. 574

$$x^2 - 3x + 5 + (-2x^2 + 11x + 1)$$

$$-x^2 + 8x + 6$$

GREATEST COMMON FACTOR:

- The largest term that can be evenly divided into two (or more) expressions

8 14 - GCF = 2

(2 is largest number that evenly divides 8 and 14)

212 96 : GCF = 4

4? 4? (4 is largest # that divides both 212 and 96)

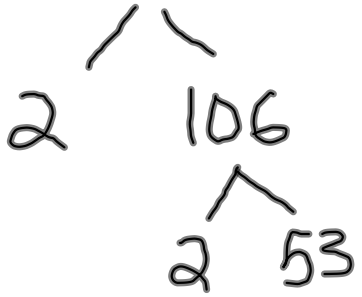
$\frac{8x^3}{8x^3} = 1$ $\frac{24x^6}{8x^3} = 3x^3$: GCF = $8x^3$

$48x^2y^3z^4$ $64xy^2z$: GCF = $16xy^2z$

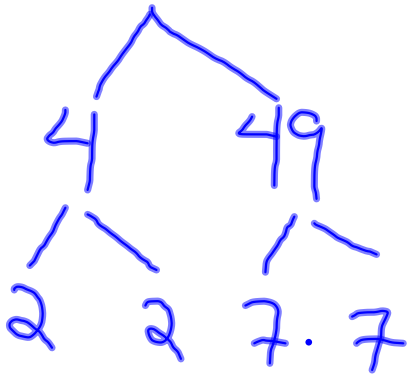
$\frac{x}{x}$ $\frac{y^2}{y^2}$ $\frac{z}{z}$

Factor Tree!

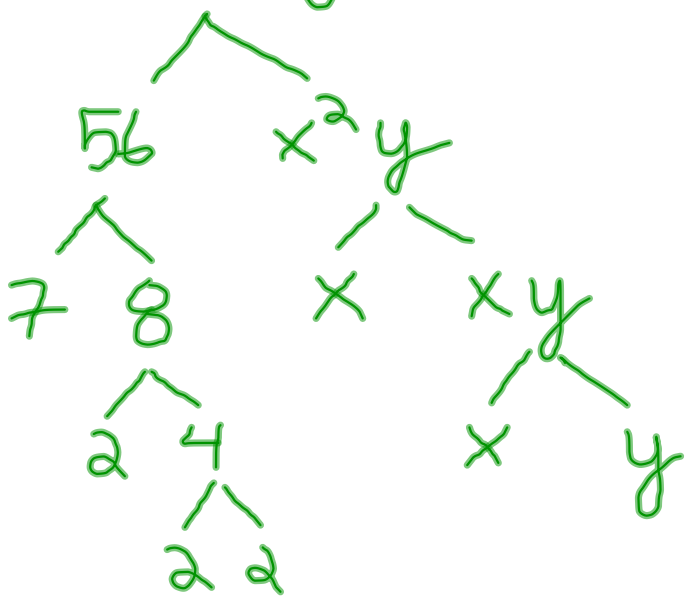
$212 = 2 \cdot 2 \cdot 53$



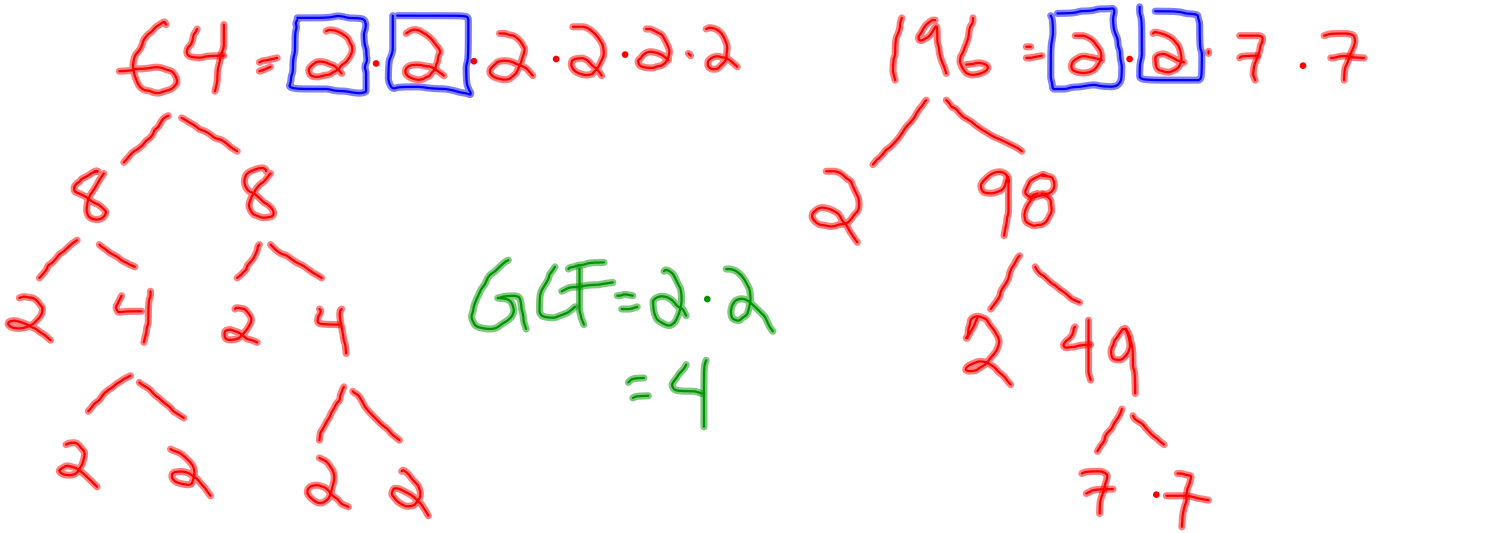
$196 = 2 \cdot 2 \cdot 7 \cdot 7 = 2^2 \cdot 7^2$



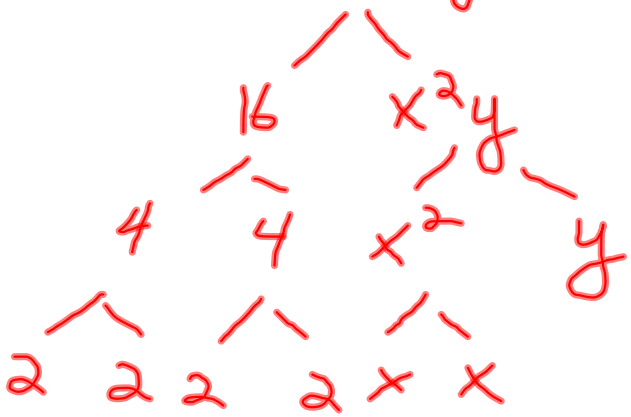
$56x^2y = 7 \cdot 2 \cdot 2 \cdot 2 \cdot x \cdot x \cdot y$



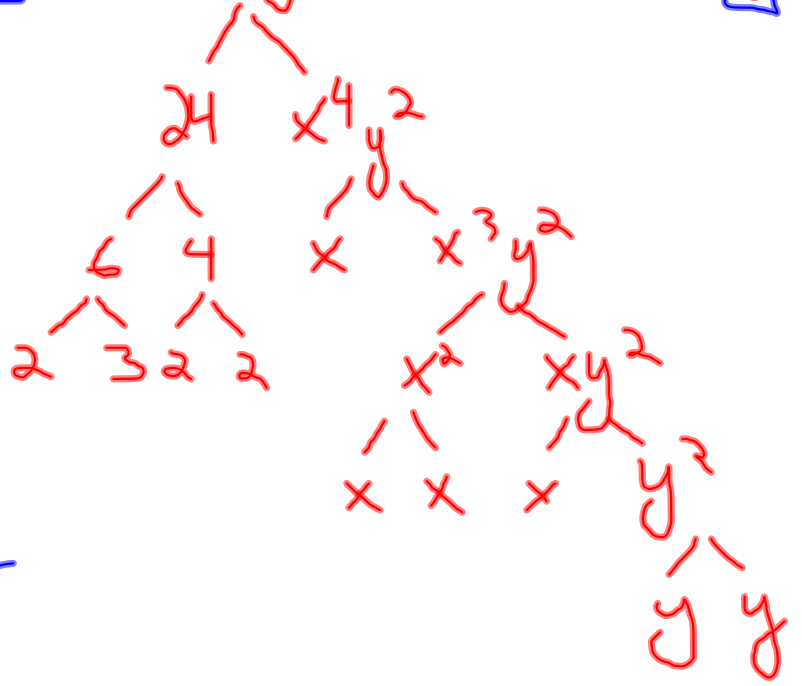
If you use a factor tree to find the factors of two expressions, you can find the greatest common factor of those expressions by multiplying together all their common prime factors



$16x^2y = 2 \cdot 2 \cdot 2 \cdot 2 \cdot x \cdot x \cdot y$



$24x^4y^2 = 2^3 \cdot 3 \cdot 2 \cdot 2 \cdot x \cdot x \cdot x \cdot x \cdot y \cdot y$



GCF: $2 \cdot 2 \cdot 2 \cdot x \cdot x \cdot y$

$: 8x^2y$

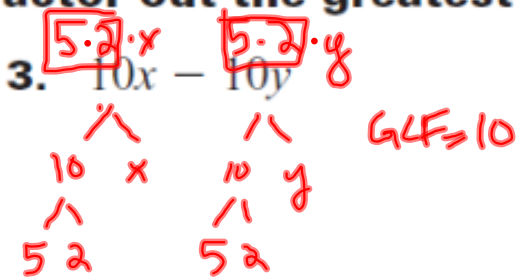
$$\frac{6n^2}{2n} - \frac{16n}{2n}$$

GCF: $2n$

$$2n(3n - 8)$$

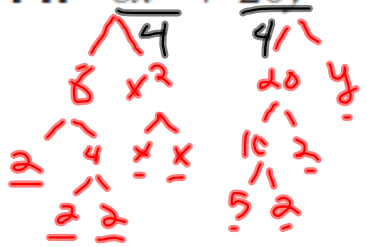
Factor out the greatest common monomial factor.

13. $10x - 10y$



$10(x-y)$

14. $8x^2 + 20y$



$4(2x^2+5y)$

15. $18a^2 - 6b$

$6(3a^2-b)$

16. $4x^2 - 4x$

17. $r^2 + 2rs$

18. $2m^2 + 6mn$

19. $5p^2q + 10q$

20. $\frac{9a^5}{a^3} + \frac{a^3}{a^3}$

$a^3(9a^2+1)$

21. $6w^3 - 14w^2$

QUIZ tomorrow:

- Simplifying exponential expressions (chapter 8)
- multiplying polynomials (9.1, 9.2, 9.3)

Homework:

p. 578 17-25, 40-45