Today's Plan:

Learning Target (standard): I will practice factoring methods and solve equations by factoring.

Students will: Complete practice problems over previous concepts at the boards, put up homework problems on the board and make necessary corrections to their own work, and complete practice problems.

Teacher will: Provide practice problems over previous concepts, check homework problems for accuracy and provide students feedback, describe and provide examples of test problems.

Assessment: Board work, homework check and homework assignment

Differentiation: Students will work at the board, go over and correct homework at their seats, and actively engage in practice problems.

Solve Equations by Factoring #1-10

1) $a = -2, 5$

2) $p = -7, 1$

3) $n = -2, -\frac{6}{5}$

4) $m = -\frac{4}{7}, 5$

5) $x = -4, \frac{6}{5}$

6) $m = -\frac{5}{2}, -\frac{2}{5}$

7) $k = -7, -\frac{1}{3}$

8) $v = \frac{3}{5}, 3$

9) $x = -3, \frac{2}{5}$

10) $a = -3, -\frac{4}{7}$

Factor Completely:

$$7ac + 4ak - 7y^2c - 4y^2k$$

$$a(7c+4k) - y^2(7c+4k)$$

$$(7c+4k)(a-y^2)$$

Factor Completely:

$$12uv - 4u^2 + 3bv - bu$$

$$4u(3v-u) + b(3v-u)$$

$$(3v-u)(4u+b)$$

Factor Completely:

$$160k^3 - 60k^2 + 32k - 12$$

$20k^2(8k-3)+4(8k-3)$

$(8k-3)(20k^2+4)$

$4(8k-3)(5k^2+1)$

Factor Completely:

$$112a^3 + 128a^2 - 42a - 48$$

$2(56a^3+64a^2-21a-24)$

$8a^2(7a+8)-3(7a+8)$

$2(7a+8)(8a^2-3)$

Factor Completely:

$$-4u^2v - 45uv^2 - 50v^3$$

$-v(4u^2+45uv+50v^2)$

200

$40 + 5 = 45$

$4u^2+40uv+5uv+50v^2$

$4u(u+10v)+5v(u+10v)$

$-v(u+10v)(4u+5v)$

Factor Completely:

$$27a^4 + 36a^2b^2 - 15b^4$$

$3(9a^4+12a^2b^2-5b^4)$

45

$15 - 3 = 12$

$9a^4+15a^2b^2-3a^2b^2-5b^4$

$3a^2(3a^2+5b^2)-b^2(3a^2+5b^2)$

$3(3a^2+5b^2)(3a^2-b^2)$

Factor Completely:

$125m^6 + 8n^6$

$m^6 = m^2 \cdot m^2 \cdot m^2$

$(5m^2+2n^2)(25m^4-10m^2n^2+4n^4)$

Factor Completely:

$x^6 - 1$

$x^6 = x^2 \cdot x^2 \cdot x^2$

$(x^2-1)(x^4+x^2+1)$

$(x+1)(x-1)(x^4+x^2+1)$

Assignment:

Factoring Review #1-12

* Test tomorrow! *