

Factoring Review Sheet #1

Here is an example of each type of problem covered so far. Use them as reference for the problems below.

DIFFERENCE OF 2-SQUARESPERFECT SQUARESTRINOMIALS (a = 1)

$$4x^2 - 49$$

$$(2x + 7)(2x - 7)$$

*2-parts (binomial) with
a minus between them
*each part is a perfect square

$$y^2 - 10y + 25$$

$$(y - 5)(y - 5)$$

$$(y - 5)^2$$

* 3-parts (trinomial)
*1st & last terms are both
perfect squares

$$z^2 - 3z - 88$$

$$(z + 8)(z - 11)$$

*mult. to get last term
 $8(-11) = -88$
*add to get middle $8+(-11)=-3$

Determine if the following binomials are an example of a difference of two squares. (yes or no)

1) $p^2 - 100$

2) $9x^2 + 1$

3) $\frac{1}{9} - w^4$

Determine if the following are examples of a perfect square. (yes or no)

4) $r^2 + 6r - 9$

5) $25m^2 - 20mn + 4n^2$

6) $\frac{16}{49}a^2 + \frac{8}{7}a + 1$

Factor the following. There are two primes.

7) $x^2 + 18x + 81$

8) $y^2 - 12y + 32$

9) $n^2 - 4$

10) $100b^2 + 9$

11) $c^2 + 4c - 21$

12) $w^2 - 8wz + 16z^2$

13) $q^2 + 13q + 30$

14) $g^2 - 5g - 6$

15) $18 + 19h + h^2$

16) $x^6 - 64y^2$

17) $p^2 + p - 24$

18) $49a^2 + 28ab + 4b^2$