

DO NOW

Factor: $10z^2 - 17z + 3$

$$(2z - 3)(5z - 1)$$

7.3 Mixed Factoring

3 Types of factoring:

1. GCF - ANY POLYNOMIAL

* Reversing the distributive property

2. DIFF - BINOMIAL

with subtraction and 2 perfect squares

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

3. LOIF - TRINOMIAL

* puzzleboxes

- shortcut if $a=1$

4. PRIME - cannot factor

Examples:

1. $y^2 + 6y - 72$ $P=72$
 $S=6$

LOIF

$$(y+12)(y-6)$$

2. $3n^3 - 12n^2 - 30n$

GCF

$$3n(n^2 - 4n - 10)$$

3. $x^2 + 8x + 16$ $P=16$
 $S=8$

LOIF

$$(x+4)(x+4)$$

4. $x^2 - 9$

DIFF

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

Try:

5. $4x^2 + 16$

GCF

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

6. $9x^2 - 6x + 1$

LOIF

$$(3x-1)(3x-1)$$

7. $25y^2 - 1$

DIFF

$$(5y-1)(5y+1)$$

8. $y^2 - 7y + 10$

LOIF

$$(y-5)(y-2)$$

HOMEWORK

Worksheet - HW 7.3 Mixed Factoring 1