Warm Up

Factor each of the following:

1. $10x^2y^5 + 20x^7y^3 - 25x^4y^9$

$5xy^3(2y^2 + 4x^5 - 5x^2y^6)$

2. $x^2(a + 3) + 2x(a + 3) - 48(a + 3)$

$(a+3)(x^2 + 2x - 48)$

Expand and simplify the following:

$3(4)^2 \quad 5(2)(3)$

$(2w-5)(w-3) - 3(2w+3)(5w+1) + 4(3w-7)^2$

$= 2w^2 - 6w - 5w + 15 - 3(10w^2 + 2w + 15w + 3) + 4(9w^2 - 42w + 49)$

$= 2w^2 - 11w + 15 - 30w^2 - 6w - 45w - 9 + 36w^2 - 168w + 196$

$8w^2 - 230w + 202$

Homework problems??

Factor By Grouping - sometimes there is no GCF amongst all of the terms in the polynomial.

 - as a result, "pairing" certain terms together
                            and removing a common factor may lead to
                            the polynomial being factorable.

 - usually done when polynomial has **FOUR** terms.

EXAMPLES...

1) $10x^2 - 5xy - 6x + 3y$ 2) $3mx - n + m - 3nx$

$5x(2x-y) -3(2x-y)$ $3mx+m-3nx-n$

$(2x-y)(5x-3)$ $m(3nx+1)-n(3x+1)$

                          $(3x+1)(m-n)$

          OR

$3mx-3nx-n+m$

$3x(m-n)+(-n+m)$

$3x(m-n)+(m-n)$

$(m-n)(3x+1)$

Expand these...

$$(x+3)(x-4) \longrightarrow (x-5)(x-8)$$

$$= x^2 - 4x + 3x - 12 \qquad = x^2 - 8x - 5x + 40$$

$$= x^2 - 1x - 12 \qquad = x^2 - 13x + 40$$

Factor these... $\longleftarrow$

$$x^2 + 1x - 20 \qquad\qquad x^2 - 8x + 12$$

$$(x+5)(x-4) \qquad\qquad (x-6)(x-2)$$

$$^+5 \quad x \quad ^-4 = ^-20$$

$$^+5 \quad + \quad ^-4 = ^+1$$

$$m^2 - 5m - 14$$
$$(m-7)(m+2)$$

$$-x - = 14$$
$$-+ - = -5$$

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

$$y^2 - 10y + 16$$
$$(y-8)(y-2)$$

$$w^2 - 12w - 13$$
$$(w+1)(w-13)$$

Pg. 166
#11, 14, 21

Attachments

Worksheet - Sketching Angles in Radians.doc