

Do Now: From yesterday's sheet #s 2, 5-7, and 17

2) $3y^2 - 48$

$3(y^2 - 16)$ GCF
 $3(y-4)(y+4)$ DOTS

5) $4a^2 + 16a + 16$

$4(a^2 + 4a + 4)$ GCF
 $4(a+2)(a+2)$ AM
 $4(a+2)^2$

6) $-x^2 + 50x - 625$

$-(x^2 - 50x + 625)$ GCF *
 $-(x-25)(x-25)$ AM
 $-(x-25)^2$
* $y = 625/x$
2nd graph
(brings you to table)

7) $ax - bx + ay - by$

$x(a-b) + y(a-b)$ grouping
 $(x+y)(a-b)$

17) $6x^2 + 13x + 6$

$a = 36$
 $b = 13$

$6x^2 + 9x + 4x + 6$
 $3x(2x+3) + 2(2x+3)$
 $(3x+2)(2x+3)$

$6x^2 + 4x + 9x + 6$
 $2x(3x+2) + 3(3x+2)$
 $(2x+3)(3x+2)$

Classwork

18) $x^4 - 11x^3 + 24x^2$

$$x^2(x^2 - 11x + 24) \quad \begin{array}{l} \text{GCF} \\ \text{AM} \end{array}$$
$$x^2(x-3)(x-8)$$

20) $9x^2 - 12x + 4$ AC
ac=36
b=-12

$$9x^2 - 6x - 6x + 4$$
$$3x(3x-2) - 2(3x-2)$$
$$(3x-2)(3x-2)$$
$$(3x-2)^2$$

30) $6 - x - x^2$ $ax^2 + bx + c$
rearrange ↗

$$-x^2 - x + 6 \quad \text{pull out -}$$
$$-(x^2 + x - 6) \quad \text{AM}$$
$$-(x+3)(x-2)$$

35) $2x^3 - 3x^2 - 2x + 3$ grouping

$$x^2(2x-3) - 1(2x-3)$$
$$(x^2-1)(2x-3)$$
$$(x+1)(x-1)(2x-3) \quad \text{DOTS}$$

* 39) $4a^2 - 4ab - 36 + b^2$

$4a(a-b) \quad (a-b)$
no good

let's try rearranging

$4a^2 - 36 - 4ab + b^2$
 $4(a^2 - 9) \quad b(-4a + b)$
no good

challenging one

rearrange

$4a^2 - 4ab + b^2 - 36$

$(2a-b)^2 - 36$

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

if $m^2 - 36$
 $(m+b)(m-b)$

grouping won't work

Complete the sheet skipping 36-38