Factor each into two binomials.

5. $9k^2 - 6k - 8$

6. $w^2 - 19w + 84$

---

5. $9k^2 - 6k - 8 = (3k - 4)(3k + 2)$

	$3k$	-4
$+2$	$9k^2$	$-12k$
	$6k$	-8

-72 : $+6 \times -12$, -6

---

6. $w^2 - 19w + 84 = (w - 12)(w - 7)$

84 : -12×-7, -19

	w	-12
w	w^2	$-12w$
-7	$-7w$	$+84$

Factoring out GCF first.

You should always look for a GCF before you do any other kind of factoring!

Factor completely.

$$\frac{6k^2}{6} - \frac{18k}{6} - \frac{324}{6}$$

$$6\left(k^2 - 3k - 54\right)$$

-54

$+6 \quad -9$

-3

$$6(k+6)(k-9)$$

Factor completely.

$$15x^2 + 35x - 30 = 5(x+3)(3x-2)$$

$$5\left(3x^2 + 7x - 6\right)$$

-18

$+9 \quad -2$

$+7$

	x	$+3$
$3x$	$3x^2$	$+9x$
-2	$-2x$	-6

Factor each completely.

a. $\left(16x^2 - 64x + 28\right)$

$$4\left(4x^2 - 16x + 7\right) \qquad 4(2x-1)(2x-7)$$

28

$-14 \quad -2$

-16

	$2x$	-7
$2x$	$4x^2$	$-14x$
-1	$-2x$	$+7$

You can now finish Hwk #20

Sec 9-6

Pages 487-488

Problems 6, 12, 14, 15, 18, 19, 23, 24, 36

Given $(b + 10)(b - 10) = b^2 - 100$

Expanding Jeopardy:

$g^2 - 9 = (g+3)(g-3)$

subtraction

- 4
- 9
- 16
- 25
- 36
- 49
- 64
- 81
- 100

Factor each.

$g^2 - 81 = (g+9)(g-9) \Rightarrow (g \pm 9)$

$b^2 - 64 = (b+8)(b-8) \rightarrow b \pm 8$

Factor:

$\sqrt{a^2 - 289} = (a+17)(a-17)$

$= 17$

Factor:

$$\sqrt{16m^2} - \sqrt{441}$$

$$4m \quad 21$$

$$4m \pm 21$$

Factor

$$36a^2 - 24$$

$$= 12(3a^2 - 2)$$

taking out the GCF is the only factoring that you can do in this problem. That is why you should always look for the GCF first.

Factor this trinomial: $x^2 + 10x + 24$

GCF - NONE

$$24$$

$$+6 \quad +4$$

$$10$$

$$(x+6)(x+4)$$

You can skip the box because a=1