7) $m^2 + 2m - 24$

factors of -24:

1, -24 2, -12 3, -8 4, -6

-1, 24 -2, 12 -3, 8 $\boxed{-4, 6}$

$(m-4)(m+6)$

~~8) $x^2 - 4x + 24$~~

9) $k^2 - 13k + 40$

factors of 40:

-1; 40 -2, 20 -4; 10 $\boxed{-5, -8}$

$(k-5)(k-8)$

10) $a^2 + 11a + 18$

factors of 18:

1, 18 $\boxed{2, 9}$ 3, 6

$(a+2)(a+9)$

11) $n^2 - n - 56$

factors of -56:

-1, 56 -2, 28 -4, 14 -7, 8

1, -56 2, -28 4, -14 $\boxed{7, -8}$

$(n+7)(n-8)$

12) $n^2 - 5n + 6$

factors of 6:

-1; 6 -2; -3

$(n-2)(n-3)$

21) $2p^2 + 2p - 4$

GCF = 2

$p^2 + p - 2$ factors of 2:

$\boxed{-1, 2}$ 1, -2

$2(p-1)(p+2)$

22) $4v^2 - 4v - 8$

GCF = 4

$v^2 - v - 2$ factors of -2:

-1, 2 $\boxed{1, -2}$

$4(v+1)(v-2)$

23) $x^2 - 15x + 50$

24) $v^2 - 7v + 10$

25) $p^2 + 3p - 18$

26) $6v^2 + 66v + 60$

*Factors: #'s that divide evenly into a #

Factoring

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Warm-up: Simplify

$(x+4)(x+7)$

$x^2+7x+4x+28$

$x^2+11x+28$

$(x-3)(x+9)$

$x^2+9x-3x-27$

$x^2+6x-27$

Factoring Polynomials

$x^2 + bx + c$

$(x \quad)(x \quad)$

Factored Form

Steps
1) If possible, factor out a GCF
2) List the factors of the last term
3) Find the 2 #'s that add to get the middle term
4) Put the #'s into the 2 binomials

Example: $r^2 + 4r + 3$

Factors of 3: 1, 3 $\quad 1+3=4$

$(r+1)(r+3)$

check: $r^2+3r+1r+3$

r^2+4r+3

* check by FOILING the binomials.

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FACTORING

Your name:

My polynomial:

is there a GCF?

After factoring out the GCF:

A value: first term

B value: middle term

C value: last term

factor pairs:

C	+		−	
B	+	−	+	−
	Both factors are +	Both factors are −	The BIGGER factor is +	The BIGGER factor is −

Based on the flowchart, add + and − signs.
Circle the pair that adds to B.

My polynomial in factored form:

QUICK CHECK

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