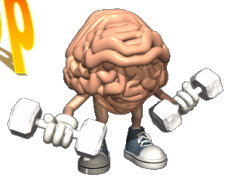
Look for

1) Is there a GCF?

2) Is it a simple trinomial?

Warm Up



Name:_____

Factor the following:

1) $n^2 + 7n - 30$

sign on larger factor; sign(s) so factors differ in sign

Last mult: -30

middle add: $+7$

$-1 \times +30$

$-2 \times +15$

$-3 \times +10$ ✓

$-5 \times +6$

$(n-3)(n+10)$

2) $-80k^4 + 10k^2$

$-10k^2(8k^2 - 1)$

OR

$10k^2(-8k^2 + 1)$

3) $b^2 + 11b + 30$

① same sign on factors

sign on largest

Last mult: $+30$

middle add: $+11$

$+1 \times +30$

$+2 \times +15$

$+3 \times +10$

$+5 \times +6$ ✓

$(b+5)(b+6)$

4) $-5x^2 + 40x - 35$

$-5(x^2 - 8x + 7)$

Simple trinomial can be factored

mult $+8$: -1×-8, -2×-4

add -7

Factor Each of the following:
(Finished For homework)

1. $x^2 - 14x + 45$	(x-9) (x-5)	2. $x^2 + 17x + 60$	(x+5) (x+12)
3. $x^2 - 18x + 80$	(x-8) (x-10)	4. $x^2 - 10x + 16$	(x-8) (x-2)
5. $x^2 - 6x + 9$	(x-3) (x-3)	6. $x^2 - 7x + 6$	(x-6) (x-1)
7. $x^2 + 20x + 99$	(x+11) (x+9)	8. $x^2 + 3x - 18$	(x-3) (x+6)
9. $x^2 - 3x - 88$	(x+8) (x-11)	10. $x^2 - 16x + 48$	(x-12) (x-4)
11. $x^2 + 11x + 30$	(x+6) (X+5)	12. $x^2 - 14x + 33$	(x-11) (x-3)
13. $x^2 + x - 30$	(x+6) (x-5)	14. $x^2 - 3x - 70$	(x-10) (x+7)
15. $x^2 + 8x - 9$	(x+9) (x-1)	16. $x^2 - 16x + 55$	(x-5) (x-11)
17. $x^2 + 6x - 72$	(x-6) (x+12)	18. $x^2 + 5x - 50$	(x+10) (x-5)
19. $x^2 + 10x + 24$	(x+6) (x+4)	20. $x^2 + 6x - 16$	(x+8) (x-2)

$x^2 + 1x - 30$

sign on largest

signs are diff

Last
Mult

-30

-1×30
-2×15
-3×10
-5×6 ✓

middle
add

$+1$

$(x-5)(x+6)$

When working with Factoring trinomials

-Always check for GCF first

$$n^3 - 4n^2 - 21n$$

$n(n^2 - 4n - 21)$

Simple trinomial

mult -21 add -4

$+1 \times 21$

$+3 \times -7$ ✓

$n(n+3)(n-7)$

$2n^2 - 14n + 24$

⊕ Same Sign

sign of b

$2(n^2 - 7n + 12)$

Simple trinomial

mult	add
+12	-7
-1 x -12	
-2 x -6	
-3 x -4 ✓	

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

Homework

Short Quiz Tuesday ~~Monday~~ Wed

Snow day??

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Questions: 10, 13, 15ab, 21ce,
19 and 20

a
b
c
e

15a) $k^2+13k+12$
b) $g^2-6g-16$

GCF then simple trinomial

10) $(w+3)(w+2) = w^2 + \square w + b$
factors $+2, +3$
add, mult

19a) $x^2 + \square x + 10$
11
7
sign of largest
mult $+10$
$+1 \times 10 \Rightarrow +11$
$+2 \times 5 \Rightarrow +7$