

Welcome to class!!

- All cell phones in holder. Then try warm-up on board you picked.

Ditloid Puzzles

Try to crack all of the Ditloid puzzles below.
They're all connected with the passing of time.
The first one has been done as an example:

24 H i a D = 24 Hours in a Day

12 M i a Y =

31 D i D =

1000 Y i a M =

1 L Y e F Y =

4 S (S S A W) =

12 D o C =

60 S i a M =

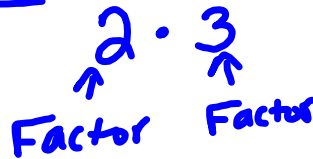
10 Y i a D =

366 D i a L Y =

GCF Factoring

What is a factor?

Factor: a number or expression that is multiplied with another number or expression to get a product.



Find the factors of 8
 $2 \cdot 4$
 2 and 4

What is a GCF?

Greatest Common Factor: the highest number or expression that divides exactly into two or more expressions.

When: Always (complete first)

How: *mentally*: Find/think of largest # that goes in both #; letter use lowest expon.

$$\frac{27x^2}{9x} + \frac{36x}{9x}$$

$$9x(3x + 4)$$

- Gcf on outside
- divide to find inside

Examples:

1) $3x^2 + 12x$

$$3x(x + 4)$$

Procedure: Break down terms to factors

$$3 \cdot 3 \cdot 3 \cdot x + 2 \cdot 2 \cdot 3 \cdot 3 \cdot x$$

$$9x(3x + 4)$$

- Circle what is in common
- Write what is left.

2) $35ab^4 - 84ab$

$$7ab(5b^3 - 12)$$

$$\frac{12x^2}{4x} + \frac{4x}{4x}$$

$$4x(3x + 1)$$

$$-7x + 14$$

$$-7(x - 2)$$

Now let's Practice

- mild
- medium
- hot

Grouping

When: You have 4 terms

How:

1. Group first two terms and group 3rd and 4th term
2. Determine/ factor out the GCF for the first two terms
3. Determine/factor out the GCF for 3rd and 4th terms
4. Make sure parenthesis are EXACTLY the same
5. Factor out the GCF (this is your parenthesis)

Examples

$3x^2 + 3x + 7x + 7$	$16ax + 6ay - 56bx - 21by$
$3x(x+1) + 7(x+1)$	$2a(8x+3y) - 7b(8x+3y)$
$(x+1)(3x+7)$	$(8x+3y)(2a-7b)$