12/10 Factoring Notes

AZ

- factoring has different types of questions. Here are two...

example 1

- opposite of distributing:

$$10j^2w^4 - 20jw^2$$

questions to ask

1. what # do they have in common? 10
2. how many of each variable could I divide out? j & w^2
   * hint, it's always the smallest exponent.

→ combine answers: $10jw^2$ ↖ add divide each piece by that

$$\frac{10j^2w^4}{10jw^2} = jw^2 \qquad \frac{-20jw^2}{10jw^2} = -2$$

$$10jw^2(jw^2 - 2)$$

$10jw^2$: what you divided by; $(jw^2 - 2)$: the results

example 2

- opposite of FOIL

$$x^2 - 7x - 30$$

questions to ask

1. what 2 #s multiply to get the last # (-30) & add to the middle (-7)

factors of 30

-1, 30	1, -30
-2, 15	2, -15
-3, 10	3, -10

answer: $(x+3)(x-10)$