Least Common Multiple (LCM): Least (smallest) Common (must work for both) Multiple (the new term will be bigger than the original by some multiplier)

Ex. What is the smallest number that you could change these both into by multiplying them each by something? Hint: You can’t just find it by doing

Answer:

With exponents, since it has to be a multiple, Answer:

Answer: choose the highest exponent

You try:

Greatest Common Factor (GCF): Greatest (largest) Common (must work for both) Factor (must divide evenly into both)

Ex. What is the biggest number that divides into both

Answer:

With exponents, since it has to Answer:

Answer: divide into it, choose the smaller

You try:

Factoring: Breaking an expression into a product of its factors

2 terms: Take out the GCF and put the rest in ( ). If that’s not possible, check for a difference of squares. The expression must be subtraction, and the 2 terms must be square terms.

Ex.

Answer: Answer: Answer:

You try:

3 terms (, where : Write as a product of 2 factors by finding 2 numbers that have a product of *c* and a sum of *b*. If directions just say to factor, the answer is . If the directions ask to solve, set those ( ) equal to zero and solve for x.

Ex. Product: 12, Sum: 7 Product: -10, Sum: -3

Answer: Factors Answer: Factors

Solve: Solve:

You try:

Factor.

Solve.

3 terms, where : The 2 numbers must have a product of *a\*c* and a sum of *b*. In order to find the 2 factors, you must change this into a 4 term problem and factor the pieces in groups.

Ex. Product: 30, Sum: 11 Numbers: 6 and 5 Add an x to each: 6x and 5x

Factor the first 2, factor the last 2

Write as 2 ( )

Answers: Factors

Solve:

2nd Ex. Product: -24, Sum: 5 Numbers: -3 and 8 Add an x to each: -3x and 8x

Factor the first 2, factor the last 2

Write as 2 ( )

Answers: Factors

Solve:

You try:

Factor:

Solve:

BONUS: Solve.