Factoring Linear Expressions

Activating Prior Knowledge: What is a factor?

Finding Factors – Examples

Directions: Find the greatest common factor (GCF) of the following:

1. 4, 12, 16 2. 12,18,9 3. 22, 8, 28 4. 56, 16, 24

When we factor in math, we are finding the actual factors of the expression – that is, we are looking for what was \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, thus we are “un-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.”

Factor:

1. $6x+10=\\_\\_\\_\\_(\\_\\_\\_x+\\_\\_\\_\\_\\_\\_)$ 2. $-4x-10=\\_\\_\\_\\_(\\_\\_\\_x+\\_\\_\\_\\_\\_\\_)$

3. $2x-8$ 4. $16x+22$

5. A rectangle has an area of 4x + 6. If the width is 2, what is the length?

6. A rectangle has an area of 9x – 12. If the width is 3x – 4, what is the length?

Factor each expression. If the expression cannot be factored, write *cannot be factored.*

1. 15x + 10 2. 7x – 3

3. 6x + 9 4. 30x – 25

5. 13x + 14 6. 50x – 75

7. 24x – 18 8. 18x + 13

9. 16x – 12 10. 36x + 45

11. A square picture frame has a perimeter of (20*x* + 32) inches. What is the length of one side of the picture frame?

12. The rectangle shown below has a total area of (4*x* + 36) square feet. Factor 4*x* + 36.

4*x*

36