Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

UNIT 6 LESSON 13

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| AIM: | SWBAT factor expressions |

**THINK ABOUT IT!**

The model below represents the expression 2a + 2b.



Write two other expressions that represent this model. One of the expressions should involve the distributive property. Explain how you came up with each.

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**Test the Conjecture**

*Test the Conjecture #1)* Write an expression that is equivalent to 12d + 9 using factoring

*Test the Conjecture #2)* Which expressions are equivalent to 24p + 32? Circle all that apply.

2(12 + 16)

8(3p + 4)

12(2p + 3)

4(8 + 6p)

Conjecture

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**PARTNER PRACTICE**

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| *Bachelor Level* |

1. Rewrite each expression as an equivalent expression in factored form. The first one has been done for you!

|  |  |  |
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| **Expression** | **Greatest Common Factor** | **Factored Form** |
| *2w + 12* | *2(w) + 2(6)* | *2(w + 6)* |
| 5p + 15 |  |  |
| 12t + 8 |  |  |
| 20m + 30 |  |  |

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| *Master Level* |

1. Circle the following equations that are equivalent to the equation 6x + 12.

6(x + 12)

2(3x + 6)

2(3x + 6)

4(2x + 8)

3(2x + 4)

3(2x + 12)

½ (12x + 24)

**INDEPENDENT PRACTICE**

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| *Bachelor Level* |

1. Rewrite each expression as an equivalent expression in factored form. The first one has been done for you!

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| **Expression** | **Greatest Common Factor** | **Factored Form** |
| *2w + 12* | *2(w) + 2(6)* | *2(w + 6)* |
| 3f + 3 |  |  |
| 24b + 8 |  |  |
| 6x + 9y |  |  |

1. Marcella and Sam were asked to write an equivalent expression to 12g + 18 using factoring. Marcella wrote 3(4g + 6) and Sam wrote 6(2g + 3). Whose expression is correct? Explain.

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| *Master Level* |

1. Write an equivalent expression to 3c + 11c using factoring.
2. Which expression(s) is equivalent to 24a + 40b? Circle all that apply.
   1. 8(a + 5b)
   2. 2(12a + 20b)
   3. 8(3a + 5b)
   4. 20(4a + 20b)
   5. 10(2.4a + 4b)
3. Write three equivalent expressions that represent the model below

n

n

7

7

1. The area of a rectangle is 12n + 36. What are all the possible dimensions of the rectangle?
2. Write an equivalent expression using factoring for the expression below

60y – 48

1. Write an equivalent expression using factoring for the expression below

9x + 12y – 18

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| *PhD Level* |

1. Angel does not think that you can rewrite this expression as an equivalent expression using factoring. Do you agree with Angel? Why or why not? If you disagree, write an equivalent expression.

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**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**EXIT TICKET**

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| Self-assessment | I mastered the learning objective today. | I am almost there. | Need more practice and feedback. |
| Teacher feedback | You mastered the learning objective today. | You are almost there. | You need more practice and feedback. |

1. Write an equivalent expression to the expression below using factoring

2x + 6

1. Select all expressions that are equivalent to the one below

**16n + 8**

a) 16(n + 8) b) 2(n + 4) c) 8(2n + 1) d) 8(2 + 1) e) ½ (32n + 16)