Roof-top Factoring



6x2 - 11x - 10

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| * 1. Factor out any GCF (Greatest Common Factor)
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| * 1. (6 )(6 )
 | * 2. Put the first number in front of both parentheses.
 |
| * 2. (6x )(6x )
 | * 3. Break down squared variable and put it in "front" or "back" as it should be.
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| * 3. (6)(-10) = -60

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| 1 | -60 |
| 2 | -30 |
| 3 | -20 |
| 4 | -15 |
| 5 | -12 |
| 6 | -10 |

  | * 4. Multiply first and third numbers (rooftop) and list all factors of product.
* 5. If product is positive, find factors that add to middle term.

         If product is negative, find           factors that subtract to middle         term. |
| 5.  (6x+4)(6x-15) | * 6. Put these factors in back of each

         set of parentheses. |
| 6.   | * 7. Since 6 X 6 = 36 and our first number is 6, these are not the final answers. If there is a **GCF** for the terms in parentheses, divide by the **GCF**.
 |
| 7.  (3x + 2)(2x - 5) | * 8. Check by multiplying first and last terms to see if the answer is correct.
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| (3)(2) = 6  | (2)(-5) = -10  |