Factoring $ax^2 + bx + c$, When $a \neq 1$

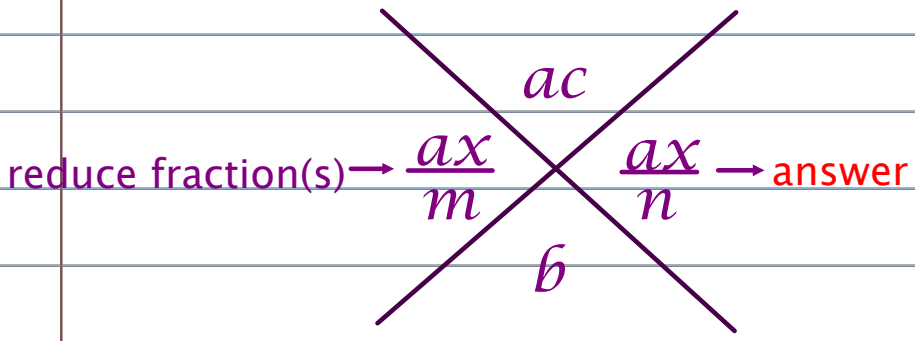
Don't copy.

There are many methods for factoring. I teach the methods that, I feel, are most efficient. Feel free to use which ever method you prefer.

Continue to learn the χ-Factor...

Formula:

When $ax^2 + bx + c$



Choose m and n such that $mn = ac$ & $m + n = b$.

Example ~ Factor completely.

$$3x^2 - 11x - 4$$

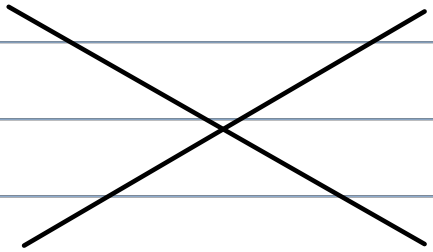
$$\frac{x}{-4} \leftarrow \frac{3x}{-12} \qquad -12 \qquad \frac{3x}{1} \qquad -11$$

$$= (x - 4)(3x + 1)$$

click above

Your turn ~ Factor completely.

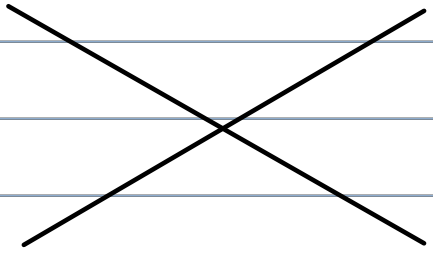
$$2x^2 - x - 15$$



$=$

Your turn ~ Factor completely.

$$3x^2 + 8x + 5$$



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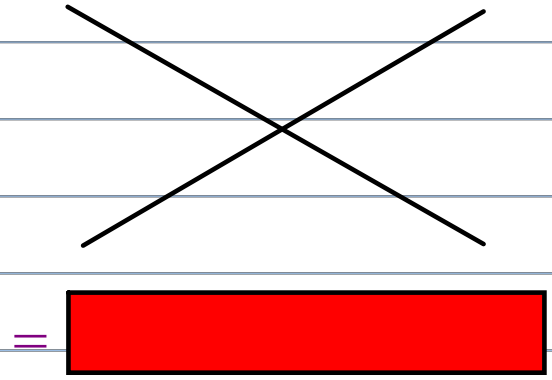
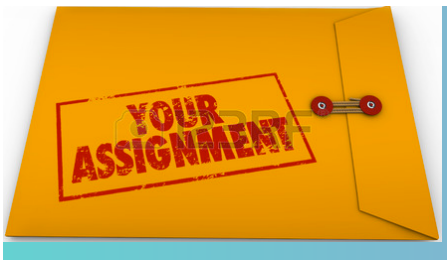
Challenge ~ Factor completely.

$$8x^2 - 24x - 14$$





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Factor each expression.

38. $3x^2 + 31x + 36$

39. $2x^2 - 19x + 24$

40. $5r^2 + 23r + 26$

41. $2m^2 - 11m + 15$

42. $5t^2 + 28t + 32$

43. $2x^2 - 27x + 36$

44. $3x^2 + 7x - 20$

45. $5y^2 + 12y - 32$

46. $7x^2 - 8x - 12$