Polynomial Multiplication - Guided Lesson Explanation

Explanation# 1

For solving the product of two binomials, we will use distributive property.

First we have to find the products of the First, Outside, Inside and then Last (FOIL) terms. And then we will add them.

We multiply the firsts terms $(3z + 5)(2z + 7)$:

$3z \times 2z = 6z^2$

We multiply the outsides terms $(3z + 5)(2z + 7)$:

$3z \times 7 = 21z$

We multiply the insides terms $(3z + 5)(2z + 7)$:

$5 \times 2z = 10z$

We multiply the lasts terms $(3z + 5)(2z + 7)$:

$5 \times 7 = 35$

And, finally we will add these results and will simplify.

$6z^2 + 21z + 10z + 35 = 6z^2 + 31z + 35$

So the answer is $6z^2 + 31z + 35$

Explanation# 2

$(3x + 2)(4x - 5)$ We can multiply each factor by the other via:

$= 3x(4x - 5) + 2(4x - 5)$

$= 12x^2 - 15x + 8x - 10$

$= 12x^2 - 7x - 10$

So, the answer is $12x^2 - 7x - 10$.

Explanation# 3

Step 1) First we see what we see what is being asked of us.

Step 2) In algebra when we use the distributive property, we are expanding or distributing.

Step 3) For solving:

$$(5x - 2)(2x + 7)$$

$$= 5x(2x + 7) - 2(2x + 7)$$

$$= 10x^2 + 35x - 4x - 14$$

$$= 10x^2 + 31x - 14$$

So, the answer is $10x^2 + 31x - 14$.