

Bathroom breaks are to be
taken before class!!

Do **NOT** move the desk!!

Turn your phone **OFF**!!

Put your phone up!!

Sit down!! Be quiet!!

Prepare to work!!

Keep your hands to yourself!!

Products of Binomials

First

Outer

Inner

Last

3)

$$(x + 3)(2x + 1)$$

$$2x^2 + x + 6x + 3$$

$$2x^2 + 7x + 3$$

5)

$$(x + 5)(3x + 2)$$

$3x^2 + 17x + 10$

$$3x^2 + 17x + 10$$

33)

A diagram illustrating the multiplication of two binomials, $(x+3)(x+4)$. The terms are color-coded: x is green, 3 is orange, x is green, and 4 is orange. Brackets connect the terms to show their products: a green bracket connects the two x terms, an orange bracket connects the two constant terms, and a purple bracket connects the 3 and x terms. A blue bracket at the bottom indicates the sum of the cross-products, $+3x$ and $+4x$.

$$x^2 + 7x + 12$$

21)

$$(x + 6)(3x + 7)$$

$+7x$

$$3x^2 + 25x + 42$$

9)

A diagram illustrating the multiplication of two binomials, $(x+4)$ and $(5x+1)$. The binomials are written in red. A green bracket above $(x+4)$ and an orange bracket above $(5x+1)$ indicate the terms to be multiplied. A purple box contains the intermediate result $+20x$, which is the product of 4 and $5x$. A blue box contains the final result $+x$, which is the sum of 4 and $5x$.

$$5x^2 + 21x + 4$$

19)

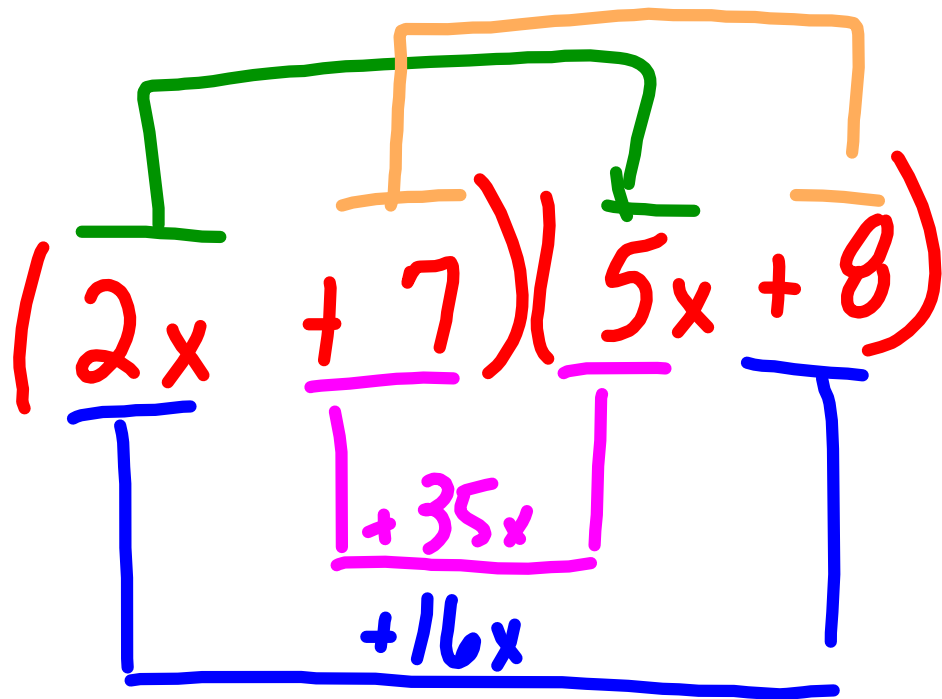
$$(2x + 7)(5x + 8)$$


Diagram illustrating the FOIL method for multiplying the binomials $(2x + 7)(5x + 8)$. The terms are connected as follows:

- First terms: $2x$ and $5x$ (green)
- Outer terms: $2x$ and 8 (orange)
- Inner terms: 7 and $5x$ (green)
- Last terms: 7 and 8 (orange)

The resulting terms are:

- $10x^2$ (green)
- $35x$ (purple) and $16x$ (blue) combine to $51x$ (blue)
- 56 (orange)

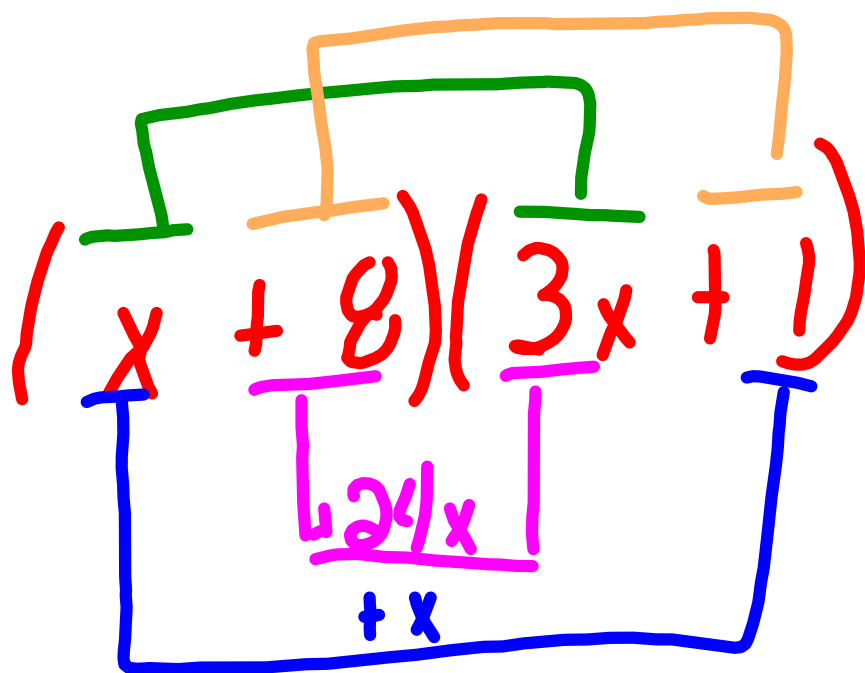
$$10x^2 + 51x + 56$$

11)

The diagram illustrates the multiplication of the binomials $(x + 8)$ and $(5x + 8)$. The terms x and 8 in the first binomial are underlined in blue. The terms $5x$ and 8 in the second binomial are underlined in blue. Colored lines connect the terms to show the multiplication process: a green line connects x to $5x$, an orange line connects x to 8 , a green line connects 8 to $5x$, and an orange line connects 8 to 8 . A pink box highlights the intermediate terms $40x$ and $64x$, with a blue line connecting them to the final result $+ 64x$ in the expanded form below.

$$5x^2 + 40x + 64$$

15)

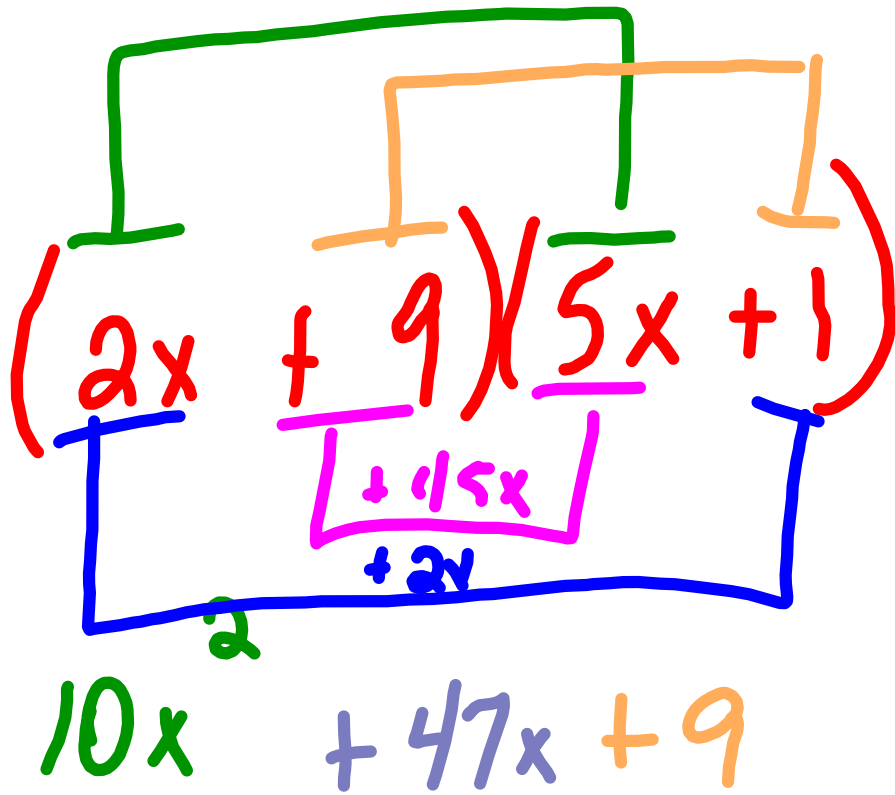


$$3x^2 + 25x + 8$$

13)

$$2x^2 + 5x + 2$$
$$(2x + 1)(x + 2)$$

17)


$$(2x + 9)(5x + 1)$$
$$10x^2 + 47x + 9$$