

1) Fill in the blanks below. Use multiplication tables to make sure your answers are correct.

$$(x + 2)^2 = (x + 2)(x + 2) = \underline{\quad}^2 + \underline{\quad}x + \underline{\quad}$$

$$(x - 3)^2 = (x - 3)(x - 3) = \underline{\quad}^2 - \underline{\quad}x + \underline{\quad}$$

$$(x \underline{\quad})^2 = (x \underline{\quad})(x \underline{\quad}) = x^2 + 8x + 16$$

$$(x \underline{\quad})^2 = (x \underline{\quad})(x \underline{\quad}) = x^2 - 4x + \underline{\quad}$$

$$(x \underline{\quad})^2 = (x \underline{\quad})(x \underline{\quad}) = x^2 - 12x + \underline{\quad}$$

$$(x \underline{\quad})^2 = (x \underline{\quad})(x \underline{\quad}) = x^2 + 18x + \underline{\quad}$$

2) The problems above are examples of perfect square trinomials because they are all equal to some binomial that is being squared. For the problems below, fill in the values that make each trinomial a perfect square trinomial.

A)	$x^2 + 6x + \underline{\quad}$
B)	$x^2 + 2x + \underline{\quad}$
C)	$x^2 - 8x + \underline{\quad}$
D)	$x^2 - 20x + \underline{\quad}$

E)	$x^2 + \underline{\quad}x + 16$
F)	$x^2 + \underline{\quad}x + 25$
G)	$x^2 - \underline{\quad}x + 4$
H)	$x^2 - \underline{\quad}x + 100$

3) Write the binomials to square that are equal to the trinomials from problem #2. Letters A and G have already been done for you.

$$A) x^2 + 6x + \underline{\quad} = (x + 9)^2$$

$$G) x^2 - \underline{\quad}x + 4 = (x - 2)^2$$

A)	$(x + 9)^2$
B)	$(x + \underline{\quad})^2$
C)	$(x + \underline{\quad})^2$
D)	$(x + \underline{\quad})^2$

E)	$(x + \underline{\quad})^2$
F)	$(x + \underline{\quad})^2$
G)	$(x - 2)^2$
H)	$(x + \underline{\quad})^2$

4) When dealing with a perfect square trinomial, like $x^2 + bx + c$, explain the mathematical relationship between the b-value and the c-value by filling in the blanks within the following sentences. To make sure your answers are correct, test them on your solutions from problem #1.

“To use the b-value to get the c-value, take the b-value and divide it by $\underline{\quad}$, then square the result to get the c-value.”

“To use the c-value to get the b-value, take the square root of the c-value, then multiply the result by $\underline{\quad}$ to get the absolute value of the b-value.”