

**Zero-Factor Property**      Name: \_\_\_\_\_  
**YouTube: Fort Bend Tutoring**  
**Solving Quadratic Equations: The Zero-Factor Property**

**Zero-Factor Property** - The Zero Product Property simply states that if  $ab = 0$ , then either  $a = 0$  or  $b = 0$  (or both). A product of factors is zero if and only if one or more of the factors is zero. This is particularly useful when solving quadratic equations.

**Solve the following equations using the zero-factor property**

Example on Fort Bend Video	Try with a partner	Try it on your own
1. $(x + 3)(x - 4) = 0$	$(2a + 1)(a - 5) = 0$	$(2k + 5)(3k - 1) = 0$
2. $x^2 + 8x + 15 = 0$	$b^2 + 2b - 35 = 0$	$r^2 - 8r + 12 = 0$
3. $5x^2 - 30x = 0$	$4w^2 - 28w = 0$	$3p^2 - 27p = 0$
4. $5x^2 - 11x = -2$	$2n^2 = -5n - 2$	$3d^2 + 4 = 8d$
5. $c(c - 11) = -18$	$b(b + 8) = -7$	$x(x - 11) = -24$

6. $2x^3 = 9x^2 - 4x$	$3p^3 = 2p^2 + 5p$	$n^3 = 11n^2 - 10n$
7. $-8n^2 - 16n - 8 = 0$	$-2x^2 + 20x - 18 = 0$	$-3m^2 - 3m + 270 = 0$
8. $63m^2 - 31m - 10 = 0$	$5v^2 + 19v + 12 = 0$	$7a^2 + 53a + 28 = 0$