 Name_____

Solving Quadratic Equations by Factoring

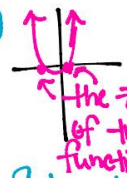
Date_____ Period____

Solve each equation by factoring.

1) $(k+1)(k-5)=0$

2) $(a+1)(a+2)=0$

When solving a quadratic equation we are trying to find x when y=0. So where does the function cross the x-axis



3) $(4k+5)(k+1)=0$

Ex 4) $(2m+3)(4m+3)=0$

* 0 · any # = 0 or any # · 0 = 0

$2m+3=0$ / $4m+3=0$

$-3\ -3$ / $-3\ -3$

$\frac{2m}{2}=\frac{-3}{2}$ / $\frac{4m}{4}=\frac{-3}{4}$

$m=\frac{-3}{2}$ / $m=\frac{-3}{4}$

So $m=\frac{-3}{2}$ & $m=\frac{-3}{4}$

This is where the function crosses the x-axis.

Ex 5) $x^2-11x+19=-5$

$+5\ +5$

Factor: $x^2-11x+24=0$

$(x-3)(x-8)=0$

$x-3=0$ / $x-8=0$

$+3\ +3$ / $+8\ +8$

$x=3$ / $x=8$

MUST equal 0, since we are finding where the function crosses the x-axis, y=0 is the equation of the x-axis.

6) $n^2+7n+15=5$

7) $n^2-10n+22=-2$

8) $n^2+3n-12=6$

9) ~~$6n^2-18n-18=6$~~

10) ~~$7r^2-14r=7$~~

Kuta Software - Infinite Algebra 1 Name Answer Key

Solving Quadratic Equations by Factoring

Date_____ Period____

Solve each equation by factoring.

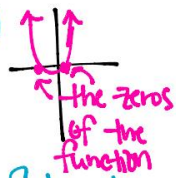
1) $(k+1)(k-5)=0$

$K=-1$ or $K=5$

2) $(a+1)(a+2)=0$

$a=-1$ or -2

When solving a quadratic equation we are trying to find x when y=0. So where does the function cross the x-axis



3) $(4k+5)(k+1)=0$

$4k+5=0$ | $k=-1$

$-5\ -5$

$\frac{4k}{4}=\frac{-5}{4}$

$k=-1.25$

$k=-1.25$ or -1

Ex 4) $(2m+3)(4m+3)=0$

$2m+3=0$ | $4m+3=0$

$-3\ -3$ | $-3\ -3$

$\frac{2m}{2}=\frac{-3}{2}$ | $\frac{4m}{4}=\frac{-3}{4}$

$m=\frac{-3}{2}$ | $m=\frac{-3}{4}$

* 0 · any # = 0 or any # · 0 = 0

So $m=\frac{-3}{2}$ & $m=\frac{-3}{4}$

This is where the function crosses the x-axis.

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$(x-3)(x-8)=0$

$x-3=0$ | $x-8=0$

$+3\ +3$ | $+8\ +8$

$x=3$ | $x=8$

6) $n^2+7n+15=5$

$-5\ -5$

$n^2+7n+10=0$

$(n+5)(n+2)=0$

$n=-5, n=-2$

7) $n^2-10n+22=-2$

$+2\ +2$

$n^2-10n+24=0$

$(n-6)(n-4)=0$

$n=6, n=4$

8) $n^2+3n-12=6$

$-6\ -6$

$n^2+3n-18=0$

$(n+6)(n-3)=0$

$n=-6, n=3$

9) $6n^2-18n-18=6$

10) $7r^2-14r=-7$