Infinite Algebra 2

Question numbers | Show answers | Directions | Changing questions hides answers | Lines | Zoom: | More like these | ← | Jump | → | 1-up

Solve each equation by factoring.

April 7

always look for GCF

16) $7a^2 = 392 + 7a$

$7a^2 - 7a - 392 = 0$

$\frac{7a^2}{7} - \frac{7a}{7} - \frac{392}{7}$

$7(a^2 - a - 56) = 0$

$x(-56)$

$+(-1)$

$7(a-8)(a+7) = 0$

$+8 \quad +8$

either $a - 8 = 0$ or $a + 7 = 0$

$a = 8$ $\quad a = -7$

55 | 8, -7

9:09 AM
4/7/2016

Solve each equation by factoring.

1) $18x^2 + 150 = -120x$

$\frac{18x^2}{6} + \frac{120x}{6} + \frac{150}{6} = 0$

$6(3x^2 + 20x + 25) = 0$

$6(3x^2 + 15x + 5x + 25) = 0$

$6[3x(x+5) + 5(x+5)] = 0$

$6(x+5)(3x+5) = 0$

$x(75)$
$+(20)$
$15, 5$

Solve each equation by factoring.

2) $7a^2 = -14 + 51a$

98 $-49, -2$

-51

$7a^2 - 51a + 14 = 0$

$7a^2 - 49a - 2a + 14 = 0$

$7a \quad -2$

$7a(a-7) - 2(a-7) = 0$

$(a-7)(7a-2) = 0$

either $a - 7 = 0$ or $7a - 2 = 0$

$+7 \quad +7$

$a = 7$

$7a = 2$

$\frac{7a}{7} = \frac{2}{7}$

$a = \frac{2}{7}$

$S = \{7, \frac{2}{7}\}$

Solve each equation by factoring.

6) $7x^2 + 15x = 18$

$-18 \quad -18$

$7x^2 + 15x - 18 = 0$

$x - 126$

$+15$

$-3, \frac{6}{7}$

$7x^2 + 21x - 6x - 18 = 0$

$-6, 21$

$7x(x+3) - 6(x+3) = 0$

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

either

$x = -3$ or $x = \frac{6}{7}$

$+6 \quad +6$

$7x - 6 = 0$

$\frac{7x}{7} = \frac{6}{7}$

$x = \frac{6}{7}$

Solve each equation by factoring.

3) $12x^2 + 56x = 20$

-20

$12x^2+56x-20=0$

$\frac{12}{4}\quad\frac{56}{4}\quad\frac{-20}{4}$

$4(3x^2+14x-5)=0$

$4(3x^2-1x+15x-5)=0$

$x \quad -15 \quad +14 \quad -1, 15$

$4[x(3x-1)+5(3x-1)]=0$

5

$4(3x-1)(x+5)=0$

either

$+1 \quad +1$

$3x-1=0$ or

$-5 \quad -5$

$x+5=0$

$x=-5$ $SS\{-5, \frac{1}{3}\}$

$\frac{3x}{3}=\frac{1}{3}$

Solve each equation by factoring.

4) $5x^2 - 6 = -29x$

$5x^2 + 29x - 6 = 0$

$5x^2 + 30x - 1x - 6 = 0$

(-1, 30)