

Factoring Quiz Grab a bubble sheet

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Factoring

Factor each completely.

1) $25k^2 - 4$	2) $5n^2 + 5n - 450$	
A) $(2k+1)(2k-1)$	A) $5(n-10)(n+9)$	
B) $(5k+2)(5k-2)$	B) $3(n-9)(n-6)$	
C) $(25k+4)^2$	C) $2(n+2)(n-8)$	
D) $(5k-2)^2$	D) $5(n+10)(n-9)$	

3) $12k^2 - 10k - 12$	4) $16x^2 + 8x + 1$	
A) $2(3k+2)(2k-3)$	A) $(16x+1)^2$	B) $(4x+1)^2$
B) $12(k+2)(k+3)$	C) Not factorable	D) $(x+5)^2$
C) $(k+2)(4k-1)$		
D) $4(k-2)(10k-1)$		

Sep 7-7:07 AM

Quiz

Homework Questions

Calendar Math

1.5 Finding Zeros

HW 1.5 Finding Zeros Worksheet

Sep 7-7:24 AM

Homework Questions

#12 $12x^2 - 75$

GCF: 3 $3(\sqrt{4}x^2 - \sqrt{25})$

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

Sep 7-7:25 AM

b) $42a^3 + 174a^2 - 180a$

GCF: $6a$ $6a(7a^2 + 29a - 30)$

$6a\left(\frac{7a + 35}{7}\right)(7a - 6)$

$6a(a+5)(7a-6)$

~~$\begin{matrix} -21 & 35 \\ 6 & 29 \end{matrix}$~~

Sep 7-7:55 AM

14) $12x^3 - 92x^2 - 32x$

GCF: $4x$ $4x(3x^2 - 23x - 8)$

$4x\left(\frac{3x-24}{3}\right)(3x+1)$

$4x(x-8)(3x+1)$

~~$\begin{matrix} -24 & 1 \\ -24 & -23 \end{matrix}$~~

$-24 + 1 = -23$

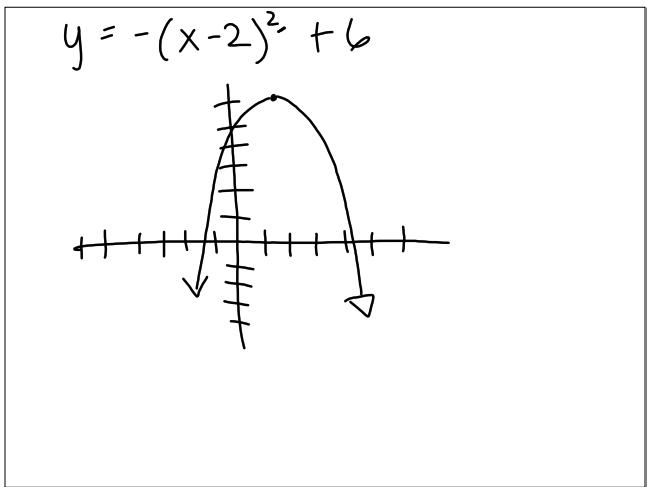
Sep 7-7:59 AM

9) $18x^2 - 32$

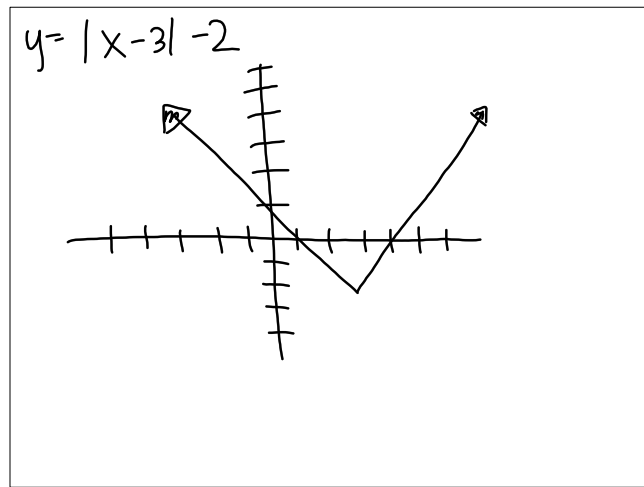
GCF: 2 $2(9x^2 - 16)$

$2(3x+4)(3x-4)$

Sep 7-8:02 AM



Sep 7-7:49 AM



Sep 7-7:51 AM

Zero Function: is an input value that produces a zero.

Zero Product Property: if $a \cdot b = 0$ then $a = 0$ or $b = 0$, so if $a(x-p)(x-q) = 0$ then $(x-p) = 0$ or $(x-q) = 0$ or $a = 0$

Finding Zeros: $f(x) = a(x-p)(x-q)$, the zero product property can be used.

Sep 7-7:25 AM

Ex 1 $f(x) = 2x(x+7)$

$\frac{2x}{2} = \frac{0}{2} \quad x = 0 \quad \{0, -7\}$

$x + 7 = 0 \quad x = -7$

Sep 7-7:27 AM

$f(x) = 1x^2 - 11x + 24$

$(x-8)(x-3) - 8 \quad -3$

$x-8=0 \quad x=8$

$x-3=0 \quad x=3$

$\{8, 3\}$

Sep 7-8:12 AM

ex 5 $\sqrt{9p^2} = 3p$

$(3p-2)(3p+2)$

$3p-2=0 \quad p=2/3$

$3p+2=0 \quad p=-2/3$

$\{2/3, -2/3\}$

Sep 7-8:23 AM

$$\begin{aligned}
 6) \quad 7n^2 - 2n &= 0 \\
 n(7n - 2) &= 0 \\
 n = 0 &\quad \left\{ 0, \frac{2}{7} \right\} \\
 7n - 2 &= 0 \\
 +2 \quad +2 & \\
 \frac{7n}{7} = \frac{2}{7} \quad n &= \frac{2}{7}
 \end{aligned}$$

Sep 7-8:31 AM

$$\begin{aligned}
 7) \quad 2r^2 + 2r - 7 &= -3r + r^2 - 1 = 0 \\
 &\quad \begin{array}{r} \swarrow \quad \searrow \\ +3r \quad -r^2 + 1 \end{array} \\
 2r^2 + 2r - 7 + 3r - r^2 + 1 &= 0 \\
 r^2 + 5r - 6 &= 0 \\
 (r - 1)(r + 6) &= 0 \\
 \begin{array}{r} -6 \\ -1 \quad 6 \\ \hline 5 \end{array} \\
 r - 1 = 0 \quad r = 1 \quad r + 6 = 0 \quad r = -6 &\quad \left\{ 1, -6 \right\} \\
 +1 \quad +1 &
 \end{aligned}$$

Sep 7-8:33 AM

$$\begin{aligned}
 x^2 - 9y^2 \\
 (x - 3y)(x + 3y)
 \end{aligned}$$

Sep 7-8:49 AM