

You need your Algebra Nation book today.  
 Turn in Section 1 Test corrections to the "file" on the back table.  
 Turn in Spiral Review 1 to the "file" on the back table.  
 Answer the following 4 problems in your notebook.



WHICH ANSWER IS CORRECT?

1.  $(x + 3)(x - 4) = 0$        $-3$  or  $-4$
2.  $(x - 2)(x + 5) = 0$        $-2$  or  $-5$
3.  $(x - 8)(2x - 1) = 0$        $8$  or  $-1/2$
4.  $(3x + 7)(x - 4) = 0$        $-7/3$  or  $4$

Sep 30-8:56 PM

WHICH ANSWER IS CORRECT?



1.  $(\overset{-3}{x} + 3)(\overset{-4}{x} - 4) = 0$        $\overset{-3}{-3}$  or  $-4$
2.  $(\overset{-2}{x} - 2)(\overset{-5}{x} + 5) = 0$        $-2$  or  $\overset{-5}{-5}$
3.  $(\overset{8}{x} - 8)(\overset{1}{2}x - 1) = 0$        $\overset{8}{8}$  or  $-1/2$
4.  $(\overset{-7/3}{3}x + 7)(\overset{4}{x} - 4) = 0$        $-7/3$  or  $\overset{4}{4}$

Sep 30-8:57 PM

pg. 36

Section 2 – Topic 4Solving Equations Using the Zero Product Property

If someone told you that the product of two numbers is 10, what could you say about the two numbers?

**The two numbers must be factors of 10.**

If someone told you that the product of two numbers is zero, what could you say about the two numbers?

**The two numbers are factors of zero.**

**One of the numbers must be zero.**

**Both of the numbers could be zero.**

Sep 30-8:59 PM

This is the **zero product property**.

➤ If  $ab = 0$ , then either  $a = 0$  or  $b = 0$ .

Describe how to use the zero product property to solve the equation  $(x - 3)(x + 9) = 0$ . Then, identify the solutions.

**$(x - 3)$  and  $(x + 9)$  are factors of zero. So, one or both of the factors could equal zero. So we will set both factors equal to zero and solve for  $x$ .**

$$x - 3 = 0$$

$$x - 3 + 3 = 0 + 3$$

$$x = 3$$

$$x + 9 = 0$$

$$x + 9 - 9 = 0 - 9$$

$$x = -9$$

**Solution set:  $\{-9, 3\}$**

Sep 30-9:05 PM

Let's Practice! pg. 37

1. Identify the solution(s) to  $2x(x+4)(x+5) = 0$ .

$$\begin{array}{l}
 \swarrow \quad \quad \quad \searrow \quad \quad \quad \searrow \\
 \begin{array}{r}
 2x = 0 \\
 \hline
 x = 0
 \end{array}
 \quad
 \begin{array}{r}
 x+4 = 0 \\
 \hline
 x = -4
 \end{array}
 \quad
 \begin{array}{r}
 x+5 = 0 \\
 \hline
 x = -5
 \end{array} \\
 \\
 x = \{-5, -4, 0\}
 \end{array}$$

2. Identify the solution(s) to  $(2x-5)(x+11) = 0$ .

$$\begin{array}{l}
 \swarrow \quad \quad \quad \searrow \\
 \begin{array}{r}
 2x - 5 = 0 \\
 \hline
 2x = 5 \\
 x = \frac{5}{2}
 \end{array}
 \quad
 \begin{array}{r}
 x + 11 = 0 \\
 \hline
 x = -11
 \end{array} \\
 \\
 x = \{-11, \frac{5}{2}\}
 \end{array}$$

Sep 30-9:06 PM

Try It!

3. Michael was given the equation  $(x+7)(x-11) = 0$  and asked to find the zeros. His solution set was  $\{-11, 7\}$ . Explain whether you agree or disagree with Michael.

**Disagree.** Michael did not set both factors equal to zero and solve. He should have gotten  $\{-7, 11\}$ .

*solving for the variable*

$$\begin{array}{l}
 x - 11 = 0 \\
 x = 11 \\
 \\
 x + 7 = 0 \\
 x = -7
 \end{array}$$

4. Identify the solution(s) to  $2(y-3) \cdot 6(-y-3) = 0$ .

$$\frac{12(y-3)(-y-3)}{12} = \frac{0}{12}$$

$$(y-3)(-y-3) = 0$$

$$y - 3 = 0$$

$$y + 3 = 0 \quad +3$$

$$y = 3$$

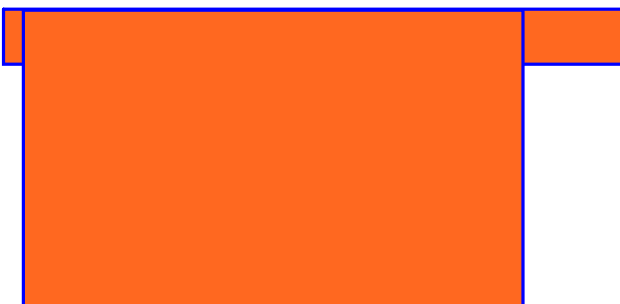
or

$$-y - 3 = 0$$

$$-y + 3 = 0 \quad +3$$

$$\frac{-1}{-1} = \frac{-3}{-1} \\
 y = -3$$

**Solution Set:**  $\{-3, 3\}$



Sep 30-9:07 PM

Classwork/Homework

Algebra Nation page 38 "Beat the Test"

Work must be shown for all 5 problems in your spiral/comp notebook in order to receive full credit.

Finish Equation Quiz if needed.

Sep 30-9:11 PM