

Solving Absolute Value Equations Quiz

SECTION 1: EVALUATING ABSOLUTE VALUES

Find the absolute value of the following:

$ -10 =$	$ 25 =$
$ -15 =$	$ 2 - 4 =$

SECTION 2: UNDERSTANDING ABSOLUTE VALUE EQUATIONS

When solving absolute value equations:

1) the absolute value must be equal to a _____ number

2) the problem is separated into two cases:

the _____ case and the _____ case

SECTION 3: EVALUATING ABSOLUTE VALUE EQUATIONS (LEVEL 1)

Find the values of x for the following:

$ x = 12$ <u>Case 1:</u> $x =$ _____ <u>Case 2:</u> $x =$ _____ $x = \{ \text{_____, _____} \}$	$ x = 8$ <u>Case 1:</u> $x =$ _____ <u>Case 2:</u> $x =$ _____ $x = \{ \text{_____, _____} \}$
$ x = 31$ <u>Case 1:</u> $x =$ _____ <u>Case 2:</u> $x =$ _____ $x = \{ \text{_____, _____} \}$	$ x = 22.5$ <u>Case 1:</u> $x =$ _____ <u>Case 2:</u> $x =$ _____ $x = \{ \text{_____, _____} \}$

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SECTION 4: EVALUATING ABSOLUTE VALUE EQUATIONS (LEVEL 2)

Find the values of x for the following:

$$|x + 2| = 6$$

Case 1:

$$x + 2 = \underline{\hspace{2cm}}$$

$$x = \underline{\hspace{2cm}}$$

Case 2:

$$x + 2 = \underline{\hspace{2cm}}$$

$$x = \underline{\hspace{2cm}}$$

$$x = \{ \underline{\hspace{1cm}}, \underline{\hspace{1cm}} \}$$

$$|x - 1| = 4$$

Case 1:

$$x - 1 = \underline{\hspace{2cm}}$$

$$x = \underline{\hspace{2cm}}$$

Case 2:

$$x - 1 = \underline{\hspace{2cm}}$$

$$x = \underline{\hspace{2cm}}$$

$$x = \{ \underline{\hspace{1cm}}, \underline{\hspace{1cm}} \}$$

$$|3x - 6| = 9$$

Case 1:

$$3x - 6 = \underline{\hspace{2cm}}$$

$$3x = \underline{\hspace{2cm}}$$

$$x = \underline{\hspace{2cm}}$$

Case 2:

$$3x - 6 = \underline{\hspace{2cm}}$$

$$3x = \underline{\hspace{2cm}}$$

$$x = \underline{\hspace{2cm}}$$

$$x = \{ \underline{\hspace{1cm}}, \underline{\hspace{1cm}} \}$$

$$|4x - 12| = 16$$

Case 1:

$$4x - 12 = \underline{\hspace{2cm}}$$

$$4x = \underline{\hspace{2cm}}$$

$$x = \underline{\hspace{2cm}}$$

Case 2:

$$4x - 12 = \underline{\hspace{2cm}}$$

$$4x = \underline{\hspace{2cm}}$$

$$x = \underline{\hspace{2cm}}$$

$$x = \{ \underline{\hspace{1cm}}, \underline{\hspace{1cm}} \}$$