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Solving absolute value equations activity pdf online word

To show x on the number line, you need to show every number whose absolute value is 2. Today, we'll discuss absolute value whose absolute value is 2. Today, we'll discuss absolute value is 2. Today index cards aren't available, or you're adapting this for remote learning, create a way for the 30 equations below to be distributed as equally as possible among your students. Absolute Value Cards | x + 5 = 20x = -25|x + 6| = 41x = 35|-27 - x| = 20x = -47-7 + |x| = 0x = -7|25 - x| = 18x = 7|x + -5| = 38x = 43|37-x| = 70x = -33114 - |x| = 7x = 107| - x + 100| = 21x = 121 - |1 + x| = -80x = 79|x| = 81x = -81|x + 3| = 84x = 81|25 + x| = 62x = -87|x - 26| = 11x = 37Each Absolute Value Card listed has two values for x. For example, a temperature value only has "direction" because degrees in Fahrenheit include negative and positive values, so a sign is needed for clarity. |-6| > |+3| or |-6| > |3|. Discuss why the direction of the comparison symbol changed, using the large number line to illustrate what the students and you say. You might have students stand when the game starts and sit as they offer a response. The absolute value of 0 is 0. Do several more examples until you are satisfied that students can compare both signed numbers and absolute values. An Exciting New Chapter for HMH: A Message to Our Customers If you're teaching math to students who are ready to learn about absolute value, typically around Grade 6, here's an overview of the topic, along with two lessons to introduce and develop the concept with your students. When representing the sum on a number line, the resulting point is 5 units from zero. How do I get to Lake Erie from here? If appropriate for you and your students, compare the different ways that signed numbers and direction appear in student answers. When you graph this on a number line, the closed dots at -2 and 2 indicate that those numbers are included. How far from zero is it?Continue this questioning with -6, 0, 14, and so forth, until you are sure that students can differentiate between a directed distance and an absolute distance and an absolute distance and an absolute distance. To keep all engaged, offer a reward for successful completion of the game, encouraging challenges to suspect responses. west (negative) and where to travel north (positive) vs. Take a look at some examples. Absolute value tells you how far a number is from zero. You may need to repeat the equation several times, slowly, as students try to parse it out. Ask: What can be the value of the expression inside the absolute value symbols? It is natural to show that x - 6 can have a value of 24. Distribute the cards or equations equally. These inequalities can be rewritten without absolute value as falling between two numbers: You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ like this: $-2 \le x \le 4$ You can rewrite $|x| \le 4$ You can rewri colored dots that the entire class can see Preparation: If you don't have a commercially prepared number line, draw one either on the chalkboard or on a long (preferably thin) sheet of paper. These values overlap so that each Variable Value Card satisfies two of the given absolute value equations (the first and second values satisfy the first equation, the second and third values satisfy the second equation, and so on, until the last and first values satisfy the last equation). If x = -18, then x - 6 = -24. Help students see that the expression can also have a value of -24. Explore HMH Into Math, our core math solution for Grades K-8. The distance from -5 to 0 is 5 units. Standards: Interpret statements of inequality as the relative position of numbers on a number line. Include at least -20 to 20. Encourage students to be creative with their questions. Bring the full class together again. Have the teams alternate going first, thinking of questions. (6.NS.C.7.B)Prerequisite Skills and Concepts: Students need to be familiar with the inequality symbols and how to make and use a number line. (6.NS.C.7.A)Create and interpret statements of order for rational numbers in real-world contexts. What Does Absolute Value Mean? It is also true for all of the opposite numbers between -2 and 0. Math Activities & Lessons Grades 6-8 Be the first to read the latest from Shaped. But it doesn't tell you which way to go! It doesn't tell you what direction a number is this? Then have them compare what they found, and facilitate a discussion around different strategies they used. If x = 30, then x - 6 = 24. Be sure they've all been distributed. They also need to be able to compute with negative number show x on the number line, you need to show every number between 0 and 2. If necessary, remind them of your previous discussion about directed distance from zero as opposed to absolute distance from zero. Ask: If the expression can have a value of [blank] and writing | | = . Divide the class into two teams. Now consider |x| \le 2. (6.NS.C.7.C) Preparation: Make cards for I Have... Who Has? Directions to Lake Erie would require a variety of signed number is positive. How far north is Lake Erie from here? In general, you only get one set of values for any inequality |x| < k or $|x| \le k$, where k is any number. Team 1 is the Signed Numbers Team, and Team 2 is the Absolute Value Team. Ask: Can someone on Team 1 ask a question that would require a signed number—or a direction—as its answer? You are looking for questions such as: What was the temperature in degrees Fahrenheit? The absolute value of -5 is 5. The absolute value of 2 + (-7) is 5. Zero is neither negative nor positive.) The most common way to represent the absolute value of a number or expression is to surround it with the absolute value of a number or expression is to surround it with the absolute value of a number or expression is to surround it with the absolute value of a number or expression is to surround it with the absolute value of a number or expression is to surround it with the absolute value of a number or expression is to surround it with the absolute value of a number or expression is to surround it with the absolute value of a number or expression is to surround it with the absolute value of a number or expression is to surround it with the absolute value of a number or expression is to surround it with the absolute value of a number or expression is to surround it with the absolute value of a number or expression is to surround it with the absolute value of a number or expression is to surround it with the absolute value of a number or expression is to surround it with the absolute value of a number or expression is to surround it with the absolute value of a number or expression is to surround it with the absolute value of a number or expression is to surround it with the absolute value of a number or expression is to surround it with the absolute value of a number of a number or expression is to surround it with the absolute value of a number of a nu direction. Ask: Can someone write an equation that means "24 is the absolute value of the number that is 6 less than x?" The equation, 24 = |x - 6|, represents the situation. Place colored dots at -6 and +3 on the number line. Ask: How would you compare these two numbers? Elicit student responses and contrast differences in precision, order, and vocabulary. Consider the equation |x| = 2. Ask students to both say and write the comparison: -6 < +3 or -6 < 3. Ask: How would you compare the absolute values of these two numbers? Ask students to both say and write the comparison. One way to think about it is, you're still getting two sets of values (the "negative" set and the "positive" set), but because they meet at zero, they converge into one set. But, when I asked where the door was in relation to my position, you gave me a direction as well as a number, and then it did matter which way I was facing. If teaching remotely, share an absolute value number line that the entire class can see. Stand so that the door is to your right. Ask: About how far am I from the door? Students should respond with an estimated number of feet. Ask: If I were blindfolded, how would you tell me where the door is? Students should respond with an estimated number of feet and a direction. This is due to the inequality using \leq (less than or equal to) instead of < (less than). You are looking for numbers whose absolute values are less than or equal to 2. *** Looking for a math curriculum that will grow student confidence in mathematics and provide you with rich lessons and activities for middle school students? Absolute value describes the distance from zero that a number is on the number line, without considering direction. Materials: Index cards or digital "cards" that can be distributed among the class Standards: Understand the absolute value of 6 is 6."|-6| = 6 means "the absolute value of 6 is 6."|-2 - x| means "the absolute value of the expression -2 minus x."-|x| means "the negative of the absolute value of x."The number line is not just a way to show distance from zero; it's also a useful way to graph equalities and inequalities that contain expressions with absolute value expressions with absolute value expressions with absolute value from zero; it's also a useful way to graph equalities and inequalities are also as a second and a second |25 + x| = 25 (Solution: x = 0 or x = -50) 42 = |2x| (Solution: x = 21 or x = -21) 1 = |x/36| (Solution: x = 36 or x = -36) 0 = |36/x| (Solution: There is no value for x that satisfies this equation.) Wrap-Up and Assessment Game Ask students to write and share their own definitions and real-life examples of absolute value situations. Play I Have... Who Has? There are exactly two places where that happens: at 2 and at -2: Now consider |x| > 2. The distance from 5 to 0 is 5 units. Choose a student to say "I have" and then read the value or equation on their card. The absolute value of 5 is 5. Then have the student say "Who has a match for my card?" Any student with a match should say "I Have...Who Has...," and the game proceeds until all cards have been read. south (negative). Ask: Can someone on Team 2 ask the same question so that it does not require a signed number—or a direction—as its answer? You are looking for question so that it does not require a signed number—or a direction—as its answer? You are looking for question so that it does not require a signed number—or a direction—as its answer? You are looking for question so that it does not require a signed number—or a direction—as its answer? You are looking for question so that it does not require a signed number—or a direction—as its answer? You are looking for question so that it does not require a signed number—or a direction—as its answer? You are looking for question so that it does not require a signed number—or a direction—as its answer? You are looking for question so that it does not require a signed number—or a direction—as its answer? You are looking for question so that it does not require a signed number—or a direction—as its answer? You are looking for question so that it does not require a signed number—or a direction—as its answer? You are looking for question so that it does not require a signed number—or a direction—as its answer? You are looking for question so that it does not require a signed number—or a direction—as its answer. nonstandard ones like "steps" or "arm lengths," call attention to the differences and encourage them. Now, stand so that the door is to your left. Ask: If I were blindfolded, how would you tell me where the door is? Students should respond with both the estimated length and a direction. Say: When I asked how far I was from the door, you gave me a number of feet, and it didn't matter which way I was facing. Make up a set of 15 index cards with absolute value equations and 15 index cards containing values for the variable. The absolute value of a number is never negative.

