

**Summarize**

**Ordering Integers from Least to Greatest**

Begin by placing the integers on a number line. Then order the points as they appear on the number line. From *left to right* is the order of the integers from *least to greatest*.

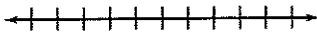
**Ordering Integers from Greatest to Least**

Begin by placing the numbers on a number line. Then order the points as they appear on the number line. From *right to left* is the order of the integers from *greatest to least*.

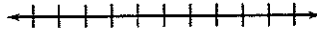
**Practice**

Use the number line to order the integers from greatest to least.

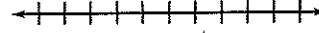
1. 9, -7, 4, 1, -2



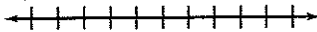
2. 3, 10, -7, 6, -8



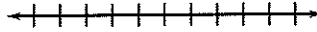
3. -12, -6, 4, 0, 1



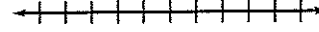
4. 10, 5, -3, -5, 11



5. -2, -14, -8, -1, -6

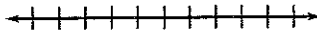


6. 0, -13, -25, -11, -22

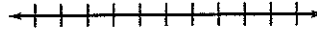


Use the number line to order the integers from least to greatest.

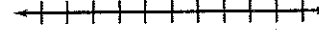
7. 8, -2, 0, -4, 3



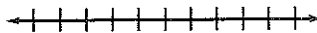
8. -3, 4, 10, -10, 0



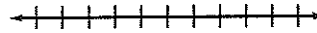
9. 8, -8, 0, 7, -7



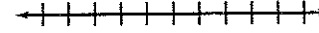
10. -4, -2, -10, 8, 4



11. 0, -15, -22, 19, -14



12. -18, -20, -2, -30, -13



Name \_\_\_\_\_

Date \_\_\_\_\_

Read the problem and answer the questions.

13. Morgan and Mackenzie are comparing their hair length to their friend Jenna's hair length. Morgan states that her hair is  $+3$  inches compared to Jenna's hair and Mackenzie states that her hair is  $-2$  inches compared to Jenna's hair. Who has the shortest hair? Write the girls' names in order of their hair length from shortest to longest.

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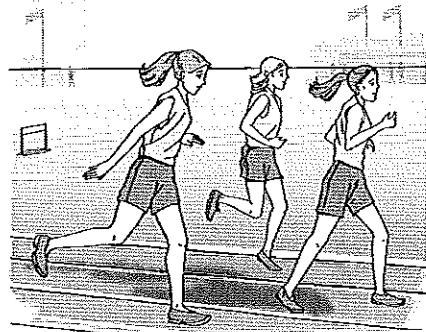
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14. The average temperatures during the winter months in a city are  $-12^{\circ}\text{F}$ ,  $10^{\circ}\text{F}$ ,  $-2^{\circ}\text{F}$ ,  $5^{\circ}\text{F}$ , and  $-3^{\circ}\text{F}$ . What is the order of the temperatures from greatest to least?

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15. Paige, Amber, and Bailey are running around a track to see how their times compare with the school record. Paige ran  $-2$  seconds as compared to the record, Amber ran  $+6$  seconds as compared to the school record, and Bailey ran  $+4$  seconds as compared to the school record. Who had the fastest time? Write the girls' names in order from fastest to slowest.



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**DID YOU GET IT?**

16. **Fill in the missing words.** To order integers from greatest to least using a number line, the greatest integer appears farthest to the \_\_\_\_\_ and the least integer appears farthest to the \_\_\_\_\_.

17. **Compare.** How can you compare a positive integer to a negative integer?

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**Summarize****Opposite**

The *opposite* of a number is a number that is the same distance from zero on a number line as the given number, but on the opposite side of zero.

**Absolute Value**

The *absolute value* of a number is the distance between 0 and the number on a number line. Remember that distance is always a positive quantity (or zero). Absolute value is shown by vertical bars on each side of the number.

**Practice**

Match the description with the number that represents it. You may use some answer choices more than once or not at all.

- |                    |       |        |
|--------------------|-------|--------|
| 1. Opposite of 19  | _____ | A. -19 |
| 2. $ 91 $          | _____ | B. 19  |
| 3. $ -19 $         | _____ | C. -91 |
| 4. Opposite of -91 | _____ | D. 91  |

Evaluate the expression.

- |                     |                     |                     |
|---------------------|---------------------|---------------------|
| 5. Opposite of -7   | 6. Opposite of 6    | 7. $ -9 $           |
| 8. Opposite of -2   | 9. $ 1 $            | 10. Opposite of 28  |
| 11. Opposite of 44  | 12. $ -199 $        | 13. Opposite of -50 |
| 14. $ 0 $           | 15. $ -762 $        | 16. Opposite of 10  |
| 17. $ 78 $          | 18. Opposite of 92  | 19. Opposite of -31 |
| 20. Opposite of -74 | 21. Opposite of 936 | 22. $ -302 $        |
| 23. $ -4002 $       | 24. Opposite of 76  | 25. $- 668 $        |
| 26. Opposite of 65  | 27. Opposite of -32 | 28. $- -8701 $      |

Name \_\_\_\_\_

Date \_\_\_\_\_

Read and solve the problem. Then explain your answer.

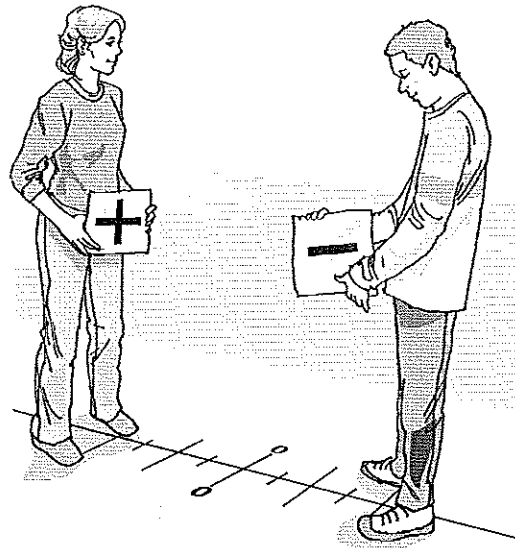
29. Simone told you that she placed a point on a number line that had an absolute value of 15. At what two numbers could she have graphed her point?

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30. Julia and Roberto are each holding cards with integers on them. One has a positive integer and the other has a negative integer. The teacher has put a number line on the floor using tape and asks Julia and Roberto to stand on the points that represent their numbers. How can they determine if their numbers are opposites without showing each other their cards?



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**DID YOU GET IT?**

31. **Fill in the missing words.** The \_\_\_\_\_ of a number is the distance between \_\_\_\_\_ and the number on a number line.

32. **Explain your reasoning.** What is the opposite of the opposite of  $-3$ ?

33. **Explain your reasoning.** How are the opposite of a number and the absolute value of a number alike? How are they different?

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**Summarize**

An integer is a positive whole number, the opposite of a positive whole number, or zero.

Positive integers are positive whole numbers and are found to the right of zero on a number line.

Negative integers are opposites of positive whole numbers and are found to the left of zero on a number line.

**Modeling Situations with Integers**

Real-world situations can be modeled by integers. When the situation represents a decrease, use a negative integer to describe it. When the situation represents an increase, use a positive integer to describe it.

**Practice**

Match the description with the integer that represents it.

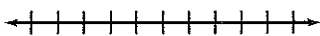
- |                                   |               |
|-----------------------------------|---------------|
| 1. An increase of 11 points _____ | A. -30 ft     |
| 2. A decrease of 11 points _____  | B. 11 points  |
| 3. A decrease of 30 feet _____    | C. -11 points |
| 4. An increase of 30 feet _____   | D. 30 ft      |

Circle the integers.

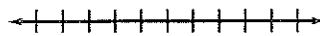
- |   |   |
|---|---|
| 5. $-\frac{4}{5}$ , 99, 122.55, -37, 14 | 6. 100.1, 0.5, $45\frac{6}{7}$ , -1055, 7         |
| 7. 676, -932.9, 12, $\frac{17}{43}$     | 8. -15, $-68\frac{33}{51}$ , 55.17, $\frac{3}{4}$ |
| 9. -722.1, -1434, $222\frac{3}{4}$ , 0  | 10. 10,922, 3.46, -5                              |

Place the integers on a number line.

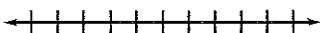
11. -1, 0, 2, -5



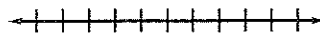
12. -6, -1, 1, -4



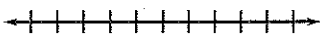
13. -2, 3, 5, 6



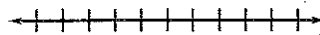
14. -10, 4, 6, -4



15. 12, 5, 0, -2



16. -13, 12, 8, -4



Name \_\_\_\_\_

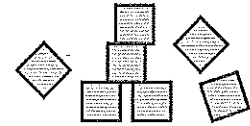
Date \_\_\_\_\_

Tell if the situation represents an *increase* or a *decrease*. Then represent the amount of the increase or decrease by an integer.

17. Karla has \$20 to spend at a jewelry store. After buying a bracelet she has \$6 remaining.

\_\_\_\_\_

18. Hannah is building a tower of blocks with her younger brother. They currently have 14 blocks stacked in their tower. After her younger brother knocks over the tower there are 4 blocks left standing.



\_\_\_\_\_

19. Jesse is filling an empty bucket with water. After he fills the bucket there are 3 gallons of water in it.

\_\_\_\_\_

20. You and a friend order a pizza that has 10 slices in it. After you and your friend finish eating, there are 4 slices remaining.

\_\_\_\_\_

**DID YOU GET IT?**

21. **Fill in the missing words.** To place integers on a number line, graph \_\_\_\_\_ to the right of zero and graph \_\_\_\_\_ to the left of zero.

22. **Explain your reasoning.** What kinds of numbers are integers?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

23. **Describe.** Give an example of a real-life increase and an example of a real-life decrease that can be described by integers. Explain your thinking.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_