

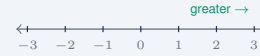
Comparing and Ordering Integers

Name: _____ Date: _____ Score: _____ / 18

Quick Review and Helpful Hints

On a number line, values *increase to the right*. Every positive number is greater than every negative number. For two negatives, the one *closer to zero* is greater (so $-2 > -8$). Use $<$, $>$, or $=$ to compare.

▶ **Example:** Which is greater, -3 or -7 ? **Work:** On the number line, -3 sits to the right of -7 (closer to 0), so it is larger. ★ **Answer:** -3



Larger values lie to the right.

◆ **Practice Problems**

Compare with $<$, $>$, or $=$, or order as directed.

- | | |
|--|---|
| <p>1. -3 ___ 5 _____</p> <p>2. -2 ___ -8 _____</p> <p>3. 0 ___ -1 _____</p> <p>4. -10 ___ -4 _____</p> <p>5. 7 ___ -7 _____</p> <p>6. -5 ___ -5 _____</p> <p>7. Greater of -6 and -2 _____</p> | <p>8. Least of $-3, -9, -1$ _____</p> <p>9. Greatest of $-4, 0, -8$ _____</p> <p>10. Order $-2, 3, -5$ least to greatest _____</p> <p>11. -100 ___ -99 _____</p> <p>12. Greater of 0 and -50 _____</p> <p>13. Least of $5, -5, 2, -2$ _____</p> <p>14. -1 ___ 1 _____</p> |
|--|---|

◆ **Word Problems**

15. Which temperature is warmer (greater): -3°F or -8°F ? _____
16. Order from coldest to warmest: $2, -4, -1$. _____
17. Which is deeper (more negative): -20 ft or -35 ft? _____
18. Compare a debt of -50 and a debt of -20 : which number is greater? _____



Answer Keys

1. $<$

2. $>$

3. $>$

4. $<$

5. $>$

6. $=$

7. -2

8. -9

9. 0

10. $-5, -2, 3$

11. $<$

12. 0

13. -5

14. $<$

15. -3

16. $-4, -1, 2$

17. -35

18. -20

Step-by-Step Explanations

1. Start by naming the process: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Think of the number line: numbers get larger as you move right. -3 is to the left of 5 , so the correct comparison is $-3 < 5$. So the final answer is $<$.

2. A good way to think about this is: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is For two negative numbers, the one closer to 0 is greater because it is farther right. -2 is closer to 0 than -8 , so $-2 > -8$. So the final answer is $>$.

3. Step by step: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is 0 is greater than any negative number because it sits to the right of all negatives on the number line. Therefore $0 > -1$. So the final answer is $>$.

4. Take it one move at a time: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Both numbers are negative, so compare their positions: -10 is farther left than -4 . Farther left means smaller, so $-10 < -4$. So the final answer is $<$.

5. Start by naming the process: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is A positive number is always greater than a negative number. Since 7 is positive and -7 is negative, $7 > -7$. So the final answer is $>$.

6. The two numbers are exactly the same point on the number line. When values match, use the equal sign: $-5 = -5$.

7. Step by step: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is To find the greater negative number, choose the one closer to 0 . Since -2 is closer to 0 than -6 , the greater number is -2 . So the final answer is -2 .

8. Take it one move at a time: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Least means smallest, or farthest left on the number line. Among $-3, -9, -1, -9$ is farthest left, so it is least. So the final answer is -9 .

9. Start by naming the process: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Zero is greater than any negative number because negatives are left of 0 . So among $-4, 0, -8$, the greatest value is 0 . So the final answer is 0 .

10. A good way to think about this is: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Least to greatest means list from left to right on the number line. The order is -5 first, then -2 , then 3 . So the final answer is $-5, -2, 3$.

11. Step by step: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is With negative numbers, the number with the larger absolute size is actually smaller. -100 is farther left than -99 , so $-100 < -99$. So the final answer is $<$.

12. Take it one move at a time: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Zero is greater than a negative number because 0 is to the right of negative values. Between 0 and -50 , the greater number is 0 . So the final answer is 0 .

13. Start by naming the process: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Least means the smallest value, not the smallest absolute value. Of $5, -5, 2, -2, -5$ is farthest left, so it is least. So the final answer is -5 .

14. A good way to think about this is: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is -1 is a negative number and 1 is positive. Since every negative is less than every positive, $-1 < 1$. So the final answer is $<$.

15. Step by step: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Warmer temperature means the greater number on the number line. Since -3 is closer to 0 and to the right of -8 , -3°F is warmer. So the final answer is -3 .

16. Take it one move at a time: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Coldest to warmest means least to greatest. The most negative temperature, -4° , comes first, then -1° , then 2° . So the final answer is $-4, -1, 2$.

17. Start by naming the process: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Deeper below the surface means a more negative elevation. Since -35 is farther below 0 than -20 , -35 ft is deeper. So the final answer is -35 .

18. A good way to think about this is: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is For debts, the greater number is the one closer to zero because it represents owing less. Since -20 is closer to 0 than -50 , -20 is greater. So the final answer is -20 .



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