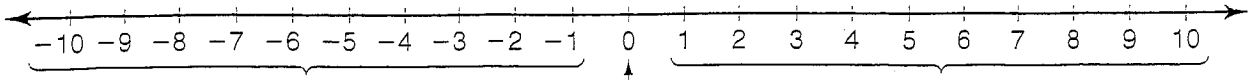
Name _____

Understanding Integers

R 8-1

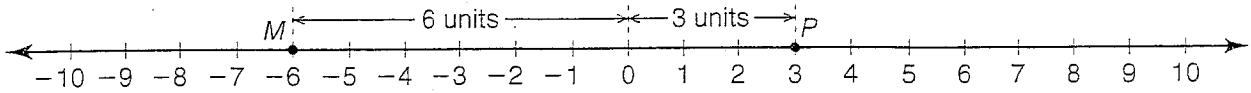


Negative integers
These are the opposites of positive integers.

Zero is neither positive nor negative. The opposite of 0 is 0.

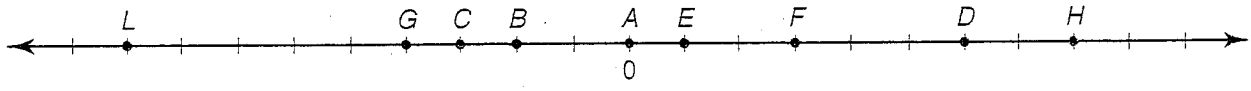
Positive integers
These are also called the counting numbers.

The absolute value of an integer is its distance from zero. Absolute value is always positive. The absolute value of −6 is written like this: $|-6|$.



On the number line above, point *M* is located at −6. Because it is 6 units from 0, its absolute value is 6.

Point *P* is located at 3 on the number line. Because it is 3 units from 0, its absolute value is 3.



For 1–9, use the number line above. Write the integer for each point. Then give its opposite and absolute values.

1. *B* _____
2. *H* _____
3. *C* _____
4. *F* _____
5. *A* _____
6. *E* _____
7. *G* _____
8. *D* _____
9. *L* _____

10. **Number Sense** John borrowed $6 from Adam. The next week John borrowed $15 more from Adam. Write an integer that represents John's total debt to Adam. _____

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Name _____

Comparing and Ordering Integers

R 8-2

When comparing two integers on a number line, the integer that is farther to the right is greater. The integer that is farther to the left is less.

Compare −6 and −10.

Because −6 is farther to the right than −10, it is greater. So −6 > −10.

Compare −1 and 2.

Because 2 is farther to the right than −1, it is greater. So 2 > −1.

Order −4, 0, −7 from least to greatest.

Because −7 is the farthest to the left, it is the least. 0 is farther to the right than −4, so −4 is the next least. So, the numbers in order from least to greatest are −7, −4, and 0.

Use >, <, or = to compare.

1. −5 ◯ 3
2. 15 ◯ −4
3. 13 ◯ 27
4. 52 ◯ |−52|
5. −9 ◯ |−9|
6. −6 ◯ −7
7. 123 ◯ 132
8. 267 ◯ 227
9. −9 ◯ −9

10. **Reasoning** Write three integers less than −27.

_____

_____

11. Order 15, −7, −12, 0, and 5 from least to greatest.

_____

_____

12. Order −19, −24, 17, −28, 19, and −17 from least to greatest.

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