Your grade: 100%

Your latest: **100%** • Your highest: **100%** • To pass you need at least 75%. We keep your highest score.

Next item →

1. Which of the following real numbers is *not* an integer?

   ◉ 4.3

   ○ 7

   ○ 0

   ○ -3

   > ⊘ **Correct**
   > 4.3 is a decimal that is between two consecutive integers (4 and 5).

2. Which of the following is the absolute value $|-7|$ of the number -7?

   ◉ 7

   ○ -7

   ○ 0

   ○ 1

   > ⊘ **Correct**
   > The absolute value of a number x is the distance along the number line from x to 0. In this case, -7 is 7 units away from 0, and so $|-7| = 7$.

3. Suppose I tell you that x and y are two real numbers which make the statement $x < y$ true. Which pair of numbers *cannot* be values for x and y?

   ○ $x = 1$ and $y = 7.3$

   ◉ $x = 5$ and $y = 3.3$

   ○ $x = -1$ and $y = 0$

   ○ $x = -17.3$ and $y = -17.1$

   > ⊘ **Correct**
   > The statement $x < y$ means that x is to the left of y on the real number line. Since 5 is to the right of 3.3, these cannot be values for x and y.

4. Suppose I tell you that w is a real number which makes both of the following statements true: $w > 1$ and $w < 1.2$. Which of the following numbers could be w?

   ◉ $w = 1.05$

   ○ $w = 11$

   ○ $w = 0$

   ○ $w = 1.2$

   > ⊘ **Correct**
   > $1.05 > 1$ is true since 1.05 is to the right of 1 on the real number line, and $1.05 < 1.2$ is also true, since 1.05 is to the left of 1.2 on the real number line.

5. Suppose that x and y are two real numbers which satisfy $x + 3 = 4y + 1$. Which of the following statements are false?

   ◉ $x = 4y$

   ○ $x + 2 = 4y$

   ○ $x = 4y - 2$

   ○ $2x + 6 = 8y + 2$

   > ⊘ **Correct**
   > The equation $x = 4y$ cannot be derived from the given equation.

6. Which of the following real numbers is in the open interval $(2, 3)$?

   ○ 3

   ○ 2

   ○ 1

   ◉ 2.1

   > ⊘ **Correct**
   > Recall that the open interval $(2, 3)$ consists of all real numbers x which satisfy $2 < x < 3$. Since $2.1 > 2$ and $2.1 < 3$, the number 2.1 is in this open interval.

7. Which of the following real numbers are in the open ray $(3.1, \infty)$?

   ○ 0

   ○ 3.1

1/1 point (×7)

○ 4.75

○ −5

8. Which of the following values for x solves the equation $-3x + 2 = -4$ 1 / 1 point

○ All values of x such that $x \leq 2$

○ $x = -2$

○ $x = \dfrac{2}{3}$

◉ $x = 2$