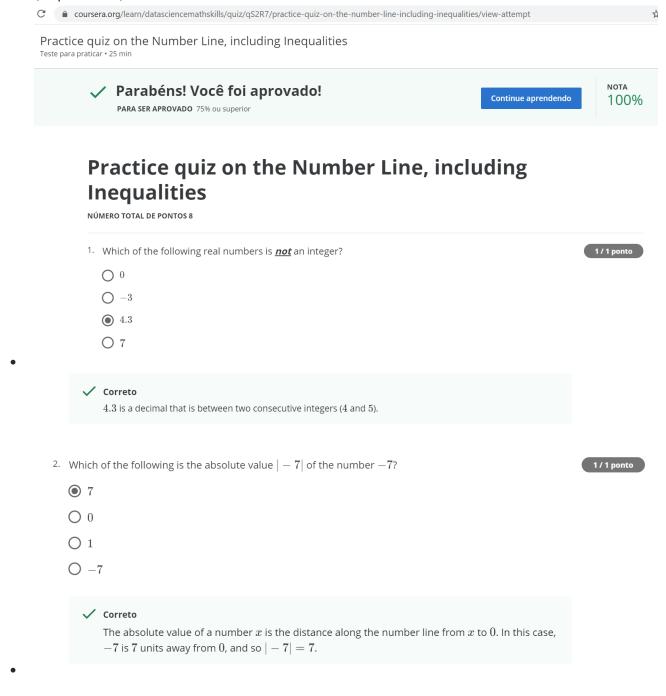
WEEK 1

 That Jagged S Symbol - Practice quiz on Simplification Rules and Sigma Notation (6 questions)



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?

1 / 1 ponto

- $\bigcirc \ x = -1 \text{ and } y = 0$
- $\bigcirc \ x = \ -17.3 \ \mathrm{and} \ y = -17.1$
- $\bigcirc x = 1 \text{ and } y = 7.3$
- $\bigcirc \hspace{0.5em} x=5 \text{ and } y=3.3$

✓ Correto

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?

1/1 ponto

- $\bigcirc w = 0$
- w = 1.05
- $0 \ w = 1.2$
- $\bigcirc w = 11$

✓ Correto

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?

1 / 1 ponto

- \bigcirc x = 4y
- $\bigcirc x + 2 = 4y$
- $\bigcirc 2x + 6 = 8y + 2$
- $\bigcirc x = 4y 2$

✓ Correto

The equation x=4y cannot be derived from the given equation.

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

1/1 ponto

- O 3
- \bigcirc 2
- 0 1
- **2**.1

✓ Correto

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 $(3.1,\infty)$?

1/1 ponto

- \bigcirc 0
- O 3.1
- **a** 4.75
- \bigcirc -5

✓ Correto

Recall that $(3.1, \infty) = \{x \in \mathbb{R} \mid x > 3.1\}$. Since 4.75 > 3.1 is true, $4.75 \in (3.1, \infty)$.

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

1 / 1 ponto

- $\bigcirc x = -2$
- $igcirc x=rac{2}{3}$
- \bigcirc All values of x such that $x \leq 2$
- \bigcirc x=2

✓ Correto

First we subtract 2 from both sides of the given equation, to obtain -3x=-6. Finally, to isolate x we divide both sides of the equation by -3 to obtain x=2.