

Compare Decimals



One Decimal Place

Laura and Alfie are comparing different decimal fractions.

6.2

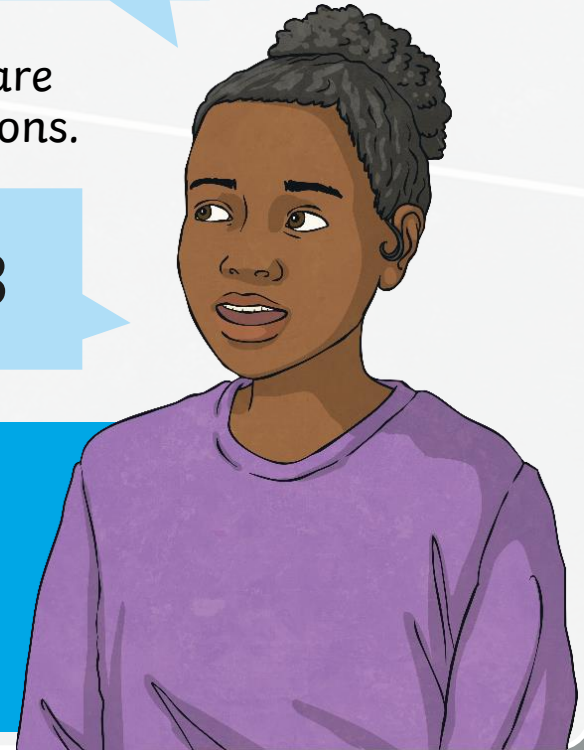
6.4

Explain how you will compare the following decimal fractions.

9.5

9.3

The ones have the same value. In 9.3, the tenths has a value of 3 and in 9.5, the tenths has a value of 5, so $9.5 > 9.3$.



Two Decimal Places

Fatima has completed these comparisons of two decimal numbers. Identify the comparison statements that are incorrect, and explain why.

$2.21 > 2.12$ because 2 ones are equal, but 2 tenths $>$ 1 tenth. The hundredths are not relevant.

7.09 is greater than 7.02 because 7 ones and 0 tenths are equal and 9 hundredths $>$ 2 hundredths.

$9.76 > 8.77$ because 9 ones $>$ 8 ones.

$3.46 > 3.39$

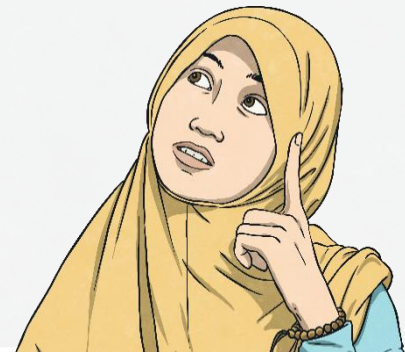
$7.09 < 7.02$

$0.62 > 0.59$

$2.21 < 2.12$

$5.03 < 5.41$

$9.76 < 8.77$



Mixed Decimal Places (1)

Alfie and Laura are comparing these two decimal fractions.

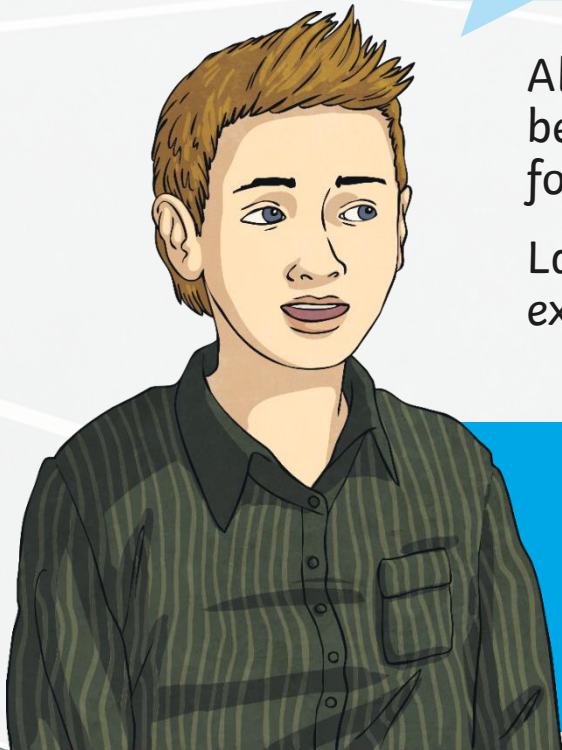
0.3

0.14

Alfie says: "0.3 is less than 0.14 because three is less than fourteen."

Laura disagrees. Help Laura to explain why Alfie is not correct.

Alfie is incorrect because the 3 in 0.3 represents 3 tenths and the 1 in 0.14 represents 1 tenth, and as 3 tenths is greater than 1 tenth, $0.3 > 0.14$. (The 4 hundredths are not used in this case.)



Mixed Decimal Places (2)

Laura and Fatima are comparing these two decimal fractions.

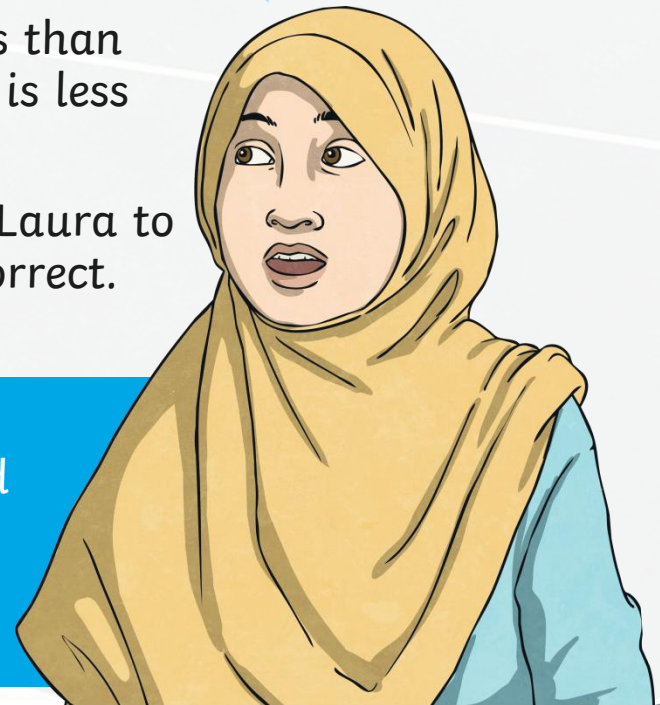
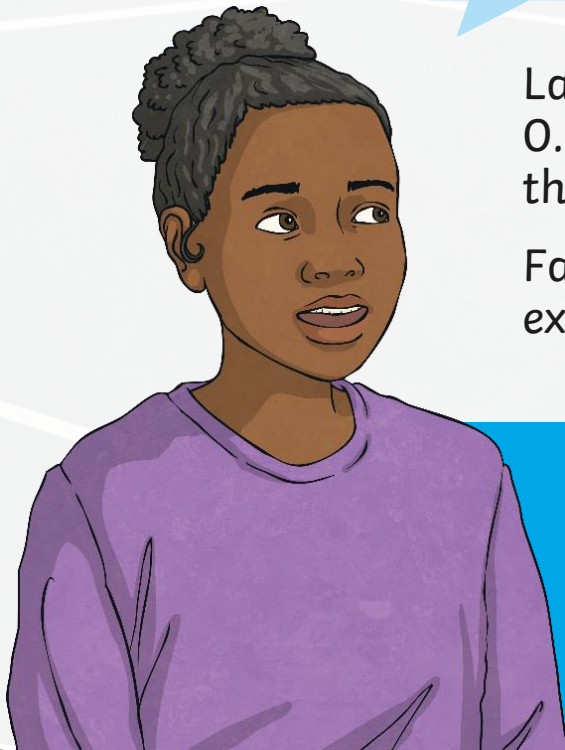
0.39

0.7

Laura says: "0.39 is less than 0.7 because thirty-nine is less than seventy."

Fatima disagrees. Help Laura to explain why Laura is correct.

Laura is correct
because $0.39 = \frac{39}{100}$ and
 $0.7 = \frac{70}{100}$, so $\frac{39}{100} < \frac{70}{100}$
because $39 < 70$.



Mixed Decimal Places (3)

Fatima has these two decimal fractions:

0.08

0.3

She says: I know 0.08 is less than 0.3 but cannot explain why. Can you help?

$$0.08 = 8/100, 0.3 = 3/10 = 30/100$$

$$8/100 < 30/100 \text{ because } 8 < 30$$

