Lesson 6 NUMBER

Ordering a set of decimals

CURRICULUM ALIGNMENT

NUM.PVT.4 investigate how decimals and percentages (and fractions) can be compared, ordered and expressed in related terms.

INTERACTIVES

Drag Sort · challenge, display

WHAT THIS LESSON TEACHES

To order a set of decimals, write them one under the other with the decimal points lined up so units sit under units, tenths under tenths and hundredths under hundredths. Then compare the digits from left to right.

→ 0.4, 0.04 and 0.40 lined up: the tenths digit shows 0.4 and 0.40 are the same size, while 0.04 is much smaller.

→ 0.04, 0.4, 0.40, 0.44 written smallest first.

MODEL THIS ON THE BOARD

ORDER 0.6, 0.06, 0.60 AND 0.66

1. Write the four decimals in a column with the decimal points lined up under each other.
2. All have **0** in the units place. Look next at the tenths column: **0**, **6**, **6**, **6**.
3. 0.06 has the smallest tenths digit so it comes first.
4. 0.6 and 0.60 both show 6 tenths and 0 hundredths, so they are equal in size.
5. 0.66 has 6 tenths and 6 hundredths, so it is the largest.
6. Smallest to biggest: 0.06, 0.6, 0.60, 0.66.

ANSWER KEY

b) 0.88, 2.06, 2.6, 2.60 (2.6 and 2.60 are the same size, so either can come first)

Q1: 0.03, 0.3, 0.30, 0.33

Q2: 0.09, 0.9, 0.90, 0.99

Q3: 2.03, 2.3, 2.30

Q4: 0.45, 0.5, 0.50, 0.7

a) Always : Trailing zeros after the decimal do not change the value, so both equal four tenths.

b) Always : When points are lined up, 0.04 has 0 tenths while 0.4 has 4 tenths.

c) Sometimes : 0.33 is larger than 0.3, but 0.04 has more digits than 0.4 and is much smaller.

d) Sometimes : 0.19 is the largest of 0.19 and 0.05, but 0.4 is larger than 0.39 although 9 is the bigger hundredths digit.

EXTENSION SHEET · STRETCH ANSWERS

S1: $6.26 < 6.89 < 7.753 < 9.4$

S2: $7.15 < 9.44 < 9.66$

S3: $4.8 < 7.32 < 9.84$

S4: $4.88 < 6.89 < 9.4$

S5: $1.83 < 4.03 < 7.02$