COMPARE AND ORDER DECIMALS

BUILDING BLOCKS

NAME _____ CLASS _____ DATE _____

KEY IDEA

Compare the ones first, then the tenths, then the hundredths.

6 tenths > 4 tenths, so 0.6 > 0.45

O	Tenths	Hundredths
0	6	
0	4	5

1 Write < or > in each box.

a) 0.3 ☐ 0.7

b) 2.5 ☐ 2.1

c) 0.4 ☐ 0.38

d) 1.9 ☐ 2.1

2 Circle the greater number in each pair.

a) 0.9 or 0.09

b) 3.45 or 3.5

c) 0.7 or 0.65

d) 4.2 or 4.19

3 Write these numbers in order, starting with the smallest.

0.6 0.15 0.5 0.06

☐ , ☐ , ☐ , ☐

smallest greatest

4 Fill in the missing numbers.

a) 0.5 = 0.☐0

b) 0.7 = ☐ hundredths

c) 0.40 = ☐ tenths

COMPARE AND ORDER DECIMALS

SUPPORT

NAME _____ CLASS _____ DATE _____

KEY IDEA

Line up the decimal points. Fill the gaps with zeros so the numbers are easier to compare.

0.7 = 0.70 and 70 hundredths > 58 hundredths, so 0.7 > 0.58

O	Tenths	Hundredths
0	7	0
0	5	8

1 Write <, > or = in each box.

a) **0.7** ☐ **0.56**

b) **3.08** ☐ **3.8**

c) **0.250** ☐ **0.25**

d) **12.4** ☐ **9.86**

2 Write these numbers in ascending order (smallest first).

0.6 **0.56** **0.605** **0.065**

☐ , ☐ , ☐ , ☐

smallest greatest

3 Four plants are measured. Write their heights in descending order (greatest first).

1.2 m **1.09 m** **1.25 m** **0.98 m**

☐ , ☐ , ☐ , ☐

tallest shortest

4 Is each statement true or false? Circle your answer.

a) 0.9 > 0.85 TRUE FALSE

b) 0.3 = 0.30 TRUE FALSE

c) 0.72 < 0.7 TRUE FALSE

d) 5.05 > 5.5 TRUE FALSE

COMPARE AND ORDER DECIMALS

CORE

NAME _____ CLASS _____ DATE _____

KEY IDEA

Compare digits with the same place value, starting from the left. Only move right when the digits match: for 3.71 and 8.05 the ones decide it, but 0.385 and 0.38 need the thousandths. The number with the most digits is not always the greatest.

FLUENCY

1 Write <, > or = in each box.

a) 0.307 ☐ 0.37

b) 15.2 ☐ 15.199

c) 0.6 ☐ 0.600

d) 2.045 ☐ 2.05

2 Write these numbers in ascending order.

7.05 7.5 7.055 7.005 7.505

☐ , ☐ , ☐ , ☐ , ☐

smallest greatest

REASONING

3 The table shows the times of five runners in a 100 m race.

RUNNER	ASHA	BEN	CARA	DEV	ELI
Time (s)	13.4	13.06	13.39	12.95	13.1

a) The fastest time wins. Who won? ☐

b) Who came 3rd? ☐

c) Fay's time was between Eli's and Cara's. Write a possible time for Fay. ☐

4 Zak says, "0.45 is greater than 0.8 because 45 is greater than 8." Explain why Zak is wrong.

COMPARE AND ORDER DECIMALS

GREATER DEPTH

NAME _____ CLASS _____ DATE _____

REASONING

1 Is each statement always, sometimes or never true? Circle your answer.

If it is sometimes true, give an example of when it is true and when it is not.

a) A decimal with more decimal places is smaller. ALWAYS SOMETIMES NEVER

b) Putting a 0 straight after the point makes it smaller. ALWAYS SOMETIMES NEVER

c) The number with the most digits is the greatest. ALWAYS SOMETIMES NEVER

PROBLEM SOLVING

2 Write these masses in order, starting with the lightest.

640 g | 0.6 kg | 1.05 kg | 1500 g | 0.065 kg

_____ , _____ , _____ , _____ , _____

lightest heaviest

3 Answer each question.

a) Write a number with 3 decimal places between 0.29 and 0.3 _____

b) Write a number between 4.6 and 4.61 _____

c) How many numbers with 2 decimal places are between 3.4 and 3.5? _____

★ CHALLENGE FOR ALL

4 Ellie makes numbers between 0 and 1 using only the digits 0 and 5 after the decimal point. Each number has 1, 2 or 3 decimal places and ends in 5, for example 0.505

a) How many numbers can Ellie make? _____

b) Write all of Ellie's numbers in ascending order.

c) How many of Ellie's numbers are greater than 0.5? _____

COMPARE AND ORDER DECIMALS

ANSWERS

BUILDING BLOCKS

1 a) < · b) > · c) > · d) <

2 a) 0.9 · b) 3.5 · c) 0.7 · d) 4.2

3 0.06, 0.15, 0.5, 0.6

4 a) 5 (0.5 = 0.50) · b) 70 · c) 4

SUPPORT

1 a) > · b) < · c) = · d) >

2 0.065, 0.56, 0.6, 0.605

3 1.25 m, 1.2 m, 1.09 m, 0.98 m

4 a) True · b) True · c) False · d) False

CORE

1 a) < · b) > · c) = · d) <

2 7.005, 7.05, 7.055, 7.5, 7.505

3 a) Dev (12.95 s) · b) Eli (13.1 s): order is Dev, Ben, Eli, Cara, Asha · c) any time greater than 13.1 and less than 13.39, e.g. 13.2

4 0.45 has 4 tenths and 0.8 has 8 tenths, so 0.8 is greater. 0.8 = 0.80, which is 80 hundredths, and 80 hundredths > 45 hundredths

GREATER DEPTH

1 a) Sometimes, e.g. 0.25 < 0.3 but 0.35 > 0.3 · b) Always (for positive numbers), e.g. 0.7 → 0.07, 3.5 → 3.05 · c) Sometimes, e.g. 34.56 > 3.5 but 3.456 < 12.5

2 0.065 kg, 0.6 kg, 640 g, 1.05 kg, 1500 g

3 a) any of 0.291 to 0.299 · b) any number between them, e.g. 4.605 · c) 9 (3.41 to 3.49)

★ a) 7 · b) 0.005, 0.05, 0.055, 0.5, 0.505, 0.55, 0.555 · c) 3 (0.505, 0.55, 0.555)