COMPARE AND ORDER INTEGERS

BUILDING BLOCKS

NAME _____ CLASS _____ DATE _____

KEY IDEA

Compare the digits from the left, one place at a time.

4627 < 4672 because 2 tens is less than 7 tens.

< means "is less than" > means "is greater than"

Th	H	T	O
4	6	2	7
4	6	7	2

1 Write < or > in each box.

a) 56 ☐ 65

b) 302 ☐ 230

c) 1890 ☐ 1809

d) 4500 ☐ 5400

2 Circle the greater number in each pair.

a) 708 or 780

b) 3099 or 3909

c) 999 or 1000

d) 6060 or 6006

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

2104 2401 1420 2014

☐ , ☐ , ☐ , ☐

smallest greatest

4 Write a number in each box to make the statement true.

a) 3400 < ☐ < 3500

b) 7980 < ☐ < 8000

COMPARE AND ORDER INTEGERS

SUPPORT

NAME _____ CLASS _____ DATE _____

KEY IDEA

Line up the digits in a place value chart.
Compare from the left until two digits are different.

8 hundreds > 2 hundreds, so 45 812 > 45 290

TTh	Th	H	T	O
4	5	8	1	2
4	5	2	9	0

1 Write <, > or = in each box.

a) **26 400** ☐ **24 600**

b) **9587** ☐ **10 000**

c) **71 052** ☐ **71 205**

d) **300 000** ☐ **three hundred thousand**

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

38 210 38 021 32 810 3821

☐ , ☐ , ☐ , ☐

smallest greatest

3 Write these numbers in descending order (greatest first).

605 000 650 000 60 500 615 000

☐ , ☐ , ☐ , ☐

greatest smallest

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

a) 47 300 > 47 030 TRUE FALSE

b) 99 999 > 100 000 TRUE FALSE

c) 12 045 < 12 450 TRUE FALSE

d) 805 000 = 850 000 TRUE FALSE

COMPARE AND ORDER INTEGERS

CORE

NAME _____ CLASS _____ DATE _____

KEY IDEA

First compare how many digits each number has. If they have the same number of digits, compare from the leading digit. 1 090 000 > 999 999 because it has more digits.

< is less than **> is greater than** **= is equal to** **≠ is not equal to**

FLUENCY

1 Write <, > or = in each box.

a) **4 020 500** ☐ **4 205 000**

b) **870 000** ☐ **8 700 000**

c) **2 000 010** ☐ **two million and ten**

d) **999 000** ☐ **1 000 000**

2 Write these numbers in ascending order.

3 450 000 **345 000** **3 405 000** **3 504 000** **34 500**

☐ , ☐ , ☐ , ☐ , ☐

smallest greatest

REASONING

3 Which digits could go in each box to make the statement true? Give all the possible digits.

a) **52** ☐ **30 > 52 830** Digit(s): ☐

b) **7** ☐ **450 < 73 450** Digit(s): ☐

c) **1** ☐ **999 > 16 000** Digit(s): ☐

4 Mia says, "98 450 is greater than 102 000 because 9 is greater than 1." Explain why Mia is wrong.

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COMPARE AND ORDER INTEGERS

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) More digits means a greater whole number. ALWAYS SOMETIMES NEVER

b) Numbers made from the same digits are equal. ALWAYS SOMETIMES NEVER

c) Swapping two digits in a number makes it greater. ALWAYS SOMETIMES NEVER

PROBLEM SOLVING

2 Use each digit card once.

1	2	4	6	8

a) Make the greatest 5-digit even number. ☐

b) Make the smallest 5-digit number that is greater than 50 000. ☐

c) Make the 5-digit number that is closest to 40 000. ☐

3 Write these numbers in ascending order. Write them all in numerals.

half a million | 500 100 | five million | 499 999 | five hundred and ten thousand

☐ , ☐ , ☐ , ☐ , ☐

smallest greatest

★ CHALLENGE FOR ALL

4 Some 6-digit numbers are made only from the digits 1 and 0. Each one starts with 1 and has exactly three 1s, for example 100 011.

a) How many of these numbers are there altogether? ☐

b) What is the greatest one? ☐

c) A > B > C are three of these numbers that are next to each other in size.

C = 100 110 A = ☐ B = ☐

COMPARE AND ORDER INTEGERS

ANSWERS

BUILDING BLOCKS

1 a) 56 < 65 · b) 302 > 230 · c) 1890 > 1809 · d) 4500 < 5400

2 a) 780 · b) 3909 · c) 1000 · d) 6060

3 1420, 2014, 2104, 2401

4 a) any number from 3401 to 3499 · b) any number from 7981 to 7999

SUPPORT

1 a) > · b) < · c) < · d) =

2 3821, 32 810, 38 021, 38 210

3 650 000, 615 000, 605 000, 60 500

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

CORE

1 a) < · b) < · c) = · d) <

2 34 500, 345 000, 3 405 000, 3 450 000, 3 504 000

3 a) 9 · b) 0, 1 or 2 · c) 6, 7, 8 or 9

4 98 450 has 5 digits and 102 000 has 6 digits, so 102 000 is greater. The 9 is worth 90 000 but the 1 is worth 100 000: compare the place value, not just the leading digit

GREATER DEPTH

1 a) Always (for positive whole numbers) · b) Sometimes, e.g. 4400 and 4400 are equal but 4040 ≠ 4400 · c) Sometimes, e.g. 25 → 52 is greater but 52 → 25 is not

2 a) 86 412 · b) 61 248 · c) 41 268

3 499 999, 500 000, 500 100, 510 000, 5 000 000

★ a) 10 · b) 111 000 · c) A = 101 010, B = 101 001