Name: **School:** **Grade:** **Class:**

3-2 Comparing and Ordering Decimals - Practice and Problem Solving

Use >, <, or = to compare each pair of decimals.

7. 0.2 ● 2.0

0.2
2.0
Compare the corresponding digits.
Since 0 < 2, 0.2 < 2.0.

9. 0.08 ● 0.8

We can place a zero to the right of the last digit of 0.8 to make the number of decimal places of both the decimals equal.
$0.08 \rightarrow 0.08$
$0.8 \rightarrow 0.80$
Compare the corresponding digits.
Since 0 < 8, 0.08 < 0.8.

11. 6.02 ● 6.20

6.02
6.20
Compare the corresponding digits.
Since 0 < 2, 6.02 < 6.20.

13. 9.003 ● 9.030

9.003
9.030
Compare the corresponding digits.
Since 0 < 3, 9.003 < 9.030.

15. 7.107 ● 7.011

7.107
7.011
Compare the corresponding digits.
Since 1 > 0, 7.107 > 7.011.

17. 0.0624 ● 0.0264

0.0624
0.0264
Compare the corresponding digits.
Since 6 > 2, 0.0624 > 0.0264.

Name: School: Grade: Class:

19. **OLYMPICS** In the 2004 Summer Olympics, Carly Patterson had a total score of 38.387 in the all-around gymnastics event. Svetlana Khorkina had a total score of 38.211 in the same event. Who had a higher score in this event?

Carly Patterson: 38.387
Svetlana Khorkina: 38.211
Compare the corresponding digits.
Since 3 > 2, Carly Patterson had a higher score.

Order each set of decimals from least to greatest.

21. 16, 16.2, 16.02, 15.99

We can place zeros to the right of the last digits to make the number of decimal places equal.
16 → 16.00
16.2 → 16.20
16.02 → 16.02
15.99 → 15.99
The order from least to greatest is 15.99, 16, 16.02, and 16.2.

23. 5.545, 4.45, 4.9945, 5.6

We can place zeros to the right of the last digits to make the number of decimal places equal.
5.545 → 5.5450
4.45 → 4.4500
4.9945 → 4.9945
5.6 → 5.6000
The order from least to greatest is 4.45, 4.9945, 5.545, and 5.6.

Order each set of decimals from greatest to least.

25. 2.1, 2.01, 2.11, 2.111

We can place zeros to the right of the last digits to make the number of decimal places equal.
2.1 → 2.100
2.01 → 2.010
2.11 → 2.110
2.111 → 2.111
The order from greatest to least is 2.111, 2.11, 2.1, and 2.01.

27. 32.32, 32.032, 32.302, 3.99

We can place zeros to the right of the last digits to make the number of decimal places equal.
32.32 → 32.320
32.032 → 32.032
32.302 → 32.302
3.99 → 03.990
The order from greatest to least is 32.32, 32.302, 32.032, and 3.99.

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29. **INVENTORY** To keep track of the inventory at his store's warehouse, Akio must arrange items on shelves according to their stock numbers. Arrange the numbers in order from least to greatest.

Stock Number
321.53
321.539
321.5

We can place zeros to the right of the last digits to make the number of decimal places equal.
321.53 → 321.530
321.539 → 321.539
321.5 → 321.500
The order from least to greatest is 321.5, 321.53, and 321.539.

31. **SELECT A TECHNIQUE** The average annual snowfall in Syracuse, New York, is 115.6 inches. Takeetna, Alaska, gets an average of 115.4 inches of snow per year. Which of the following techniques might you use to find which city, on average, gets more snowfall during a 10-year time period? Justify your selection(s). Then use the technique(s) to solve the problem.

mental math	number sense	estimation

Sample answer: You can use number sense. Since 115.6 > 115.4, Syracuse receives more snowfall than Takeetna each year on average. Therefore, Syracuse would receive more in 10 years than Takeetna.

33. **FIND THE ERROR** Ryan and Mateo are ordering 0.4, 0.5, and 0.49 from least to greatest. Who is correct? Explain your reasoning.

Ryan
0.4, 0.5, 0.49

Mateo
0.4, 0.49, 0.5

Mateo is correct.
To see why, place zeros to the right of the last digits to make the number of decimal places equal. Then compare the corresponding digits.
0.4 → 0.40
0.49 0.49
0.5 → 0.50
Compare the corresponding digits.
0.4 < 0.49 < 0.5

35. **WRITING IN MATH** Refer to the table in Exercise 36. Create a problem that involves comparing the times of two of the runners.

Sample answer: Who finished the race first, Ariel or Nelia?

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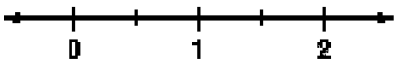
37. If Cheyenne correctly marked 1.005, 0.981, 0.899, and 0.93 on a number line, which number was closest to zero?



F 1.005
G 0.981
H 0.899
J 0.93

H; 0.899 is closest to zero on a number line.

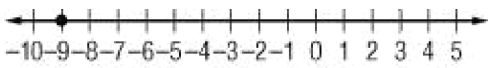
39. **TEMPERATURE** At the doctor, Clara's temperature was 101.5°F. Write this temperature in expanded form.

Write in expanded form.
$(1 \times 100) + (0 \times 10) + (1 \times 1) + (5 \times 0.1)$

Graph each integer on a number line.

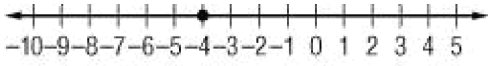
41. –9

Begin at 0 and go 9 units left.



43. –4

Begin at 0 and go 4 units left.



PREREQUISITE SKILL Identify each underlined place-value position.

45. 3.$\underline{0}$54

The digit 0 is the first digit to the right of the decimal point.
So, it is in the tenths place.

47. 2.960$\underline{0}$

The indicated digit 0 is the fourth digit to the right of the decimal point.
So, it is in the ten-thousandths place.