

Rational Number Ranking

Compare and order numbers written in different forms.

GRADE 7 • 7.NS.2

7.NS.2 "The student will reason and use multiple strategies to compare and order rational numbers. Use multiple strategies (e.g., benchmarks, number line, equivalency) to compare (using symbols $<$, $>$, $=$)"

NAME _____

DATE _____

CHOOSE A COMMON FORM

When rational numbers are written in different forms, rewrite them as decimals, fractions, or percents that are easy to compare. Remember that among negative numbers, the number farther left on a number line is smaller.

WORKED EXAMPLE

Compare: $-1 \frac{1}{4}$ ____ -1.18

1. Rewrite $-1 \frac{1}{4}$ as -1.25 .
2. Compare -1.25 and -1.18 .
3. Because -1.25 is farther left on the number line, it is smaller.

Answer: $-1 \frac{1}{4} < -1.18$

PRACTICE 6 problems

- 1** 1. Compare. Write $<$, $>$, or $=$: $-\frac{3}{5}$ ____ -0.58

ANSWER _____

- 2** 2. Compare. Write $<$, $>$, or $=$: 135% ____ $1 \frac{1}{20}$

ANSWER _____

- 3** 3. Order from least to greatest: -1.06 , $-\frac{1}{10}$, -0.99

ANSWER _____

- 4** 4. Compare. Write $<$, $>$, or $=$: $\frac{9}{4}$ ____ 2.24

ANSWER _____

- 5** 5. Order from greatest to least: 0 , $-\frac{3}{8}$, 0.42 , -0.405

ANSWER _____

- 6** 6. Compare. Write $<$, $>$, or $=$: $-\frac{7}{3}$ ____ -2.34

ANSWER _____

APPLY IT Show your work

- 1** 1. Four friends have dance-game accuracy scores of 62%, $\frac{5}{8}$, 0.605, and 0.59. List the scores from highest to lowest.

WORK SPACE

ANSWER _____

- 2** 2. In a racing game, Avery has a ranking modifier of $-\frac{3}{4}$, Bo has -0.72, and Chen has $-\frac{7}{10}$. Whose modifier is greatest? Explain with decimal equivalents.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Order from least to greatest: $-1\frac{1}{8}$, -1.37, $-1\frac{2}{5}$, -1.375. Explain your reasoning using decimal equivalents.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	1. Compare. Write $<$, $>$, or $=$: $-\frac{3}{5}$ ____ -0.58	$-\frac{3}{5} < -0.58$
2	2. Compare. Write $<$, $>$, or $=$: 135% ____ $1\frac{7}{20}$	$135\% = 1\frac{7}{20}$
3	3. Order from least to greatest: -1.06 , $-1\frac{1}{10}$, -0.99	$-1\frac{1}{10}$, -1.06, -0.99
4	4. Compare. Write $<$, $>$, or $=$: $\frac{9}{4}$ ____ 2.24	$\frac{9}{4} > 2.24$
5	5. Order from greatest to least: 0 , $-\frac{3}{8}$, 0.42 , -0.405	0.42, 0, $-\frac{3}{8}$, -0.405
6	6. Compare. Write $<$, $>$, or $=$: $-\frac{7}{3}$ ____ -2.34	$-\frac{7}{3} > -2.34$

PART 2 • APPLY IT

1. **$\frac{5}{8}$, 62% , 0.605 , 0.59** Rewrite the scores as decimals: 0.62 , 0.625 , 0.605 , and 0.59 . Then order the decimals from greatest to least.
2. **Chen's modifier is greatest.** The decimal equivalents are -0.75 , -0.72 , and -0.7 . Since -0.7 is greatest, Chen has the greatest modifier.

CHALLENGE

$-1\frac{2}{5} < -1\frac{1}{8} = -1.375 < -1.37$. The decimal equivalents are -1.4 , -1.375 , -1.375 , and -1.37 .

Accept equivalent decimal, fraction, mixed-number, or percent reasoning. For ordered lists, accept equivalent forms and require that equal values are shown as equal or placed together.