MATHEMATICS · GRADES 4-6

Comparing fractions, decimals, and percentages

Difficulty level: Intermediate

Mathematics: Grades 4-6

This document was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

Overview of the concept

This is how you compare amounts written in different forms. A test score as a percent against a fraction of the class cannot be compared until you put them all in one form. Once they match, the comparison is easy, and it is a skill you need whenever a sale, a score, and a share show up in the same problem.



Rule

Put them all in the same form first, then compare.

A fraction, a decimal, and a percentage cannot be compared until they are written the same way. Convert each one to the same form, such as all percents, and then the bigger number is the bigger amount.

© 2026 Brett Robbins. All Rights Reserved.

Worked examples

EXAMPLE 1

Q Which is bigger: $\frac{1}{2}$ or 60%?

SOLUTION

$\frac{1}{2} = 50\%$

50% vs 60%

60% is bigger

Convert to the same form: $\frac{1}{2} = 50\%$

Now compare: 50% versus 60%.

60% is bigger.

EXAMPLE 2

Q Order smallest to largest $0.3, \frac{1}{4}, 40\%$

SOLUTION

$0.3 = 30\%, \frac{1}{4} = 25\%, 40\%$

25%, 30%, 40%

Order: $\frac{1}{4}$, 0.3, 40%

Convert all to percents: $0.3 = 30\%$ and $\frac{1}{4} = 25\%$

Compare: 25%, 30%, 40%

Order: $\frac{1}{4}$, 0.3, 40%

© 2026 Brett Robbins. All Rights Reserved.

Practice questions

1 Which is bigger: $\frac{3}{4}$ or 70%?

Understand It with Pulse | Flag a mistake

2 Which is bigger: 0.6 or 55%?

Understand It with Pulse | Flag a mistake

3 Which is smaller: $\frac{1}{5}$ or 25%?

Understand It with Pulse | Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

4 Order these from smallest to largest:

40%

0.5

$\frac{1}{4}$

A $40\%, \frac{1}{4}, 0.5$

B $\frac{1}{4}, 40\%, 0.5$

C $0.5, 40\%, \frac{1}{4}$

D $40\%, 0.5, \frac{1}{4}$

Understand It with Pulse | Flag a mistake

5 Which is bigger: $\frac{2}{5}$ or 45%?

Understand It with Pulse | Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

6 **Which is smaller: 0.8 or 75%?**

Understand It with Pulse | Flag a mistake

7 **Order these from smallest to largest:**

$\frac{1}{4}$

30%

0.2

A $\frac{1}{4}$, 0.2, 30%

B 30%, $\frac{1}{4}$, 0.2

C 0.2, $\frac{1}{4}$, 30%

D 0.2, 30%, $\frac{1}{4}$

Understand It with Pulse | Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

8 **Which is bigger: 0.35 or $\frac{1}{3}$?**

Understand It with Pulse | Flag a mistake

9 **Which is smaller: 90% or $\frac{9}{10}$?**

A 90% is smaller

B $\frac{9}{10}$ is smaller

C Neither, they are equal

D They cannot be compared

Understand It with Pulse | Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

10 Order these from smallest to largest:

60%

$\frac{2}{3}$

0.5

A) 60%, 0.5, $\frac{2}{3}$

B) $\frac{2}{3}$, 60%, 0.5

C) 0.5, $\frac{2}{3}$, 60%

D) 0.5, 60%, $\frac{2}{3}$

Understand It with Pulse | Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

ANSWER KEY

1. $\frac{3}{4}$

2. 0.6

3. $\frac{1}{5}$

4. $\frac{1}{4}$, 40%, 0.5

5. 45%

6. 75%

7. 0.2, $\frac{1}{4}$, 30%

8. 0.35

9. Neither, they are equal

10. 0.5, 60%, $\frac{2}{3}$

© 2026 Brett Robbins. All Rights Reserved.