

Grade 3 · Equivalent and Comparing Fractions · Worksheet Answer Key

Common Core 3.NF.A.3 · mathovore.fr

This answer key gives a worked solution for every problem on the Grade 3 equivalent fractions worksheet. Compare each step with your own work, and check that the two fractions in every comparison describe the same whole.

Grade 3 Common Core: 3.NF.A.3

Problem 1: Same size

Bar A has 2 equal parts with 1 shaded: $\frac{1}{2}$. Bar B has 4 equal parts with 2 shaded: $\frac{2}{4}$. The shaded parts have the same length.

$$\frac{1}{2} = \frac{2}{4}$$

Problem 2: Halves and fourths

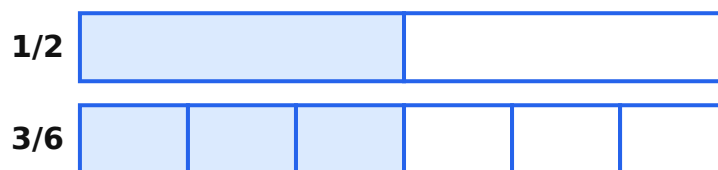
Each half is cut into 2 equal fourths, so one half is 2 fourths.

$\frac{1}{2} = \frac{2}{4}$, so the missing number is **2**.

Problem 3: Halves and sixths

Cut each half into 3 equal parts. The bar then has 6 equal parts, and the half is 3 of them.

$\frac{1}{2} = \frac{3}{6}$, so the missing number is **3**.



One half equals three sixths.

Problem 4: Thirds and sixths

Each third is cut into 2 equal sixths, so one third is 2 sixths.

$\frac{1}{3} = \frac{2}{6}$, so the missing number is **2**.

Problem 5: Fourths and eighths

Each fourth is cut into 2 eighths. Three fourths become 3 groups of 2 eighths, which is 6 eighths.

$\frac{3}{4} = \frac{6}{8}$, so the missing number is **6**.

Problem 6: Two thirds

Each third is cut into 2 equal sixths. Two thirds become 4 sixths.

$\frac{2}{3} = \frac{4}{6}$, so the missing number is **4**.

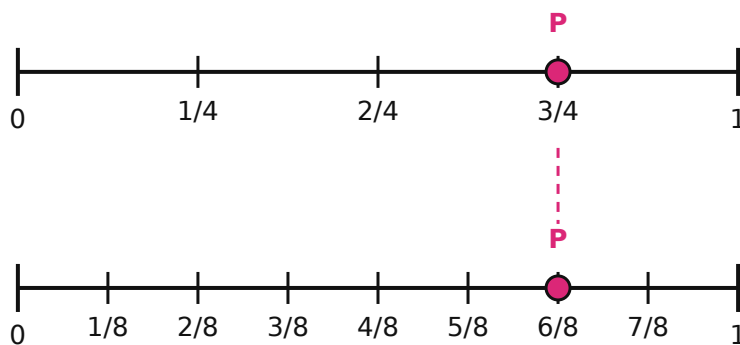
Problem 7: A simpler name

- a. $\frac{2}{4} = \frac{1}{2}$
- b. $\frac{3}{6} = \frac{1}{2}$
- c. $\frac{2}{4} = \frac{1}{2}$
- d. $\frac{3}{6} = \frac{1}{2}$

Problem 8: Same point on a number line

The dashed line shows that P is at the same place on both lines. The bottom line has 8 equal parts, and P is 6 parts from 0.

$\frac{3}{4} = \frac{6}{8}$, so P is $\frac{6}{8}$ on the bottom line.



P is at $\frac{3}{4}$ and $\frac{6}{8}$.

Problem 9: Whole numbers as fractions

- a. $\frac{3}{1}$
- b. $\frac{1}{1}$
- c. **6**, because 6 wholes is $\frac{6}{1}$.

Problem 10: A whole bar

- a. All 4 of 4 parts are shaded: $\frac{4}{4}$.
- b. The whole bar is shaded: **1**.

$$\frac{4}{4} = 1$$

Problem 11: Fractions equal to 1

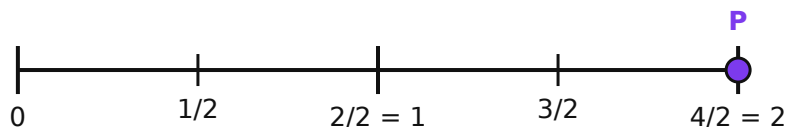
A fraction equals 1 when the numerator and denominator are the same number.

$$\frac{3}{3}, \frac{6}{6}, \frac{8}{8}$$

Problem 12: Whole numbers on a number line

Each part is $\frac{1}{2}$. Point P is 4 parts from 0.

$$2 = \frac{4}{2}$$



P is at 4/2, which is the same as 2.

Problem 13: Same denominator, bars

Both bars are cut into eighths. Three eighths is less than five eighths.

$$\frac{3}{8} < \frac{5}{8}$$

Problem 14: Same denominator

The denominators match, so compare the numerators.

- a. $\frac{2}{6} < \frac{4}{6}$
- b. $\frac{7}{8} > \frac{3}{8}$
- c. $\frac{3}{4} = \frac{3}{4}$

Problem 15: Same numerator, bars

One fourth is a bigger piece than one eighth, because the bar is cut into fewer parts.

$$\frac{1}{4} > \frac{1}{8}$$

Problem 16: Same numerator

The numerators match, so compare the denominators. Fewer parts in the whole means bigger parts.

- a. 
- b. 
- c. 

Problem 17: Which is greater

Both fractions count 2 parts. Thirds are bigger parts than fourths, so 2 thirds cover more of the bar.

$\frac{2}{3}$ is greater: $\frac{2}{3} > \frac{2}{4}$.

Problem 18: Put in order

- a. The denominators match, so order the numerators: $\frac{1}{8} < \frac{3}{8} < \frac{5}{8}$.
- b. The numerators match, so the biggest denominator is the smallest fraction: $\frac{1}{8} < \frac{1}{4} < \frac{1}{2}$.

Problem 19: Two ribbons

The shaded parts of the two bars have the same length.

Yes. $\frac{2}{4} = \frac{4}{8}$

Problem 20: Pizza slices

The denominators match, so compare the numerators: 5 is greater than 3.

Priya eats more. $\frac{3}{8} < \frac{5}{8}$

Problem 21: Garden beds

The numerators match, so compare the denominators. Thirds are bigger parts than sixths.

Liam plants the greater part. $\frac{2}{3} > \frac{2}{6}$

Problem 22: Relay teams

Team A runs 4 parts of size $\frac{1}{4}$, which is $\frac{4}{4}$ mile, or 1 mile. Team B runs 2 parts of size $\frac{1}{2}$, which is $\frac{2}{2}$ mile, or 1 mile.

Yes, both teams run 1 mile. $\frac{4}{4} = \frac{2}{2} = 1$

Problem 23: Camp on the trail

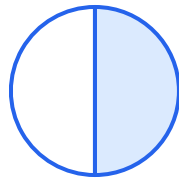
Each marker is $\frac{1}{2}$ mile apart, and the campsite is at the 4th marker.

$\frac{4}{2} = 2$, so the campsite is **2 miles** from the start.

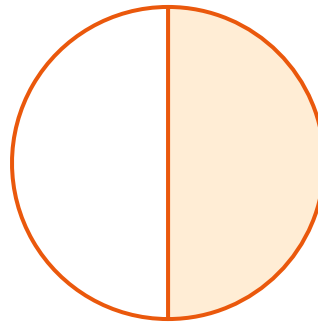
Problem 24: Different wholes

The two pizzas are different sizes, so the wholes are different. Half of the large pizza is more pizza than half of the small pizza.

No, Ethan ate more. Fractions can be compared only when they describe the same whole.



Small pizza



Large pizza

The shaded half of the large pizza is bigger than the shaded half of the small pizza.