

*Equivalent* Fractions

Answer key

4.NF.A.1

15 problems

1. Fill in the blank to make an equivalent fraction:  $\frac{1}{2} = \frac{?}{4}$ .

**Answer** 2Multiply top and bottom by 2:  $\frac{1 \times 2}{2 \times 2} = \frac{2}{4}$ .

2. Fill in the blank:  $\frac{1}{3} = \frac{?}{9}$ .

**Answer** 3Multiply top and bottom by 3:  $\frac{1 \times 3}{3 \times 3} = \frac{3}{9}$ .

3. Fill in the blank:  $\frac{2}{5} = \frac{?}{10}$ .

**Answer** 4Multiply top and bottom by 2:  $\frac{2 \times 2}{5 \times 2} = \frac{4}{10}$ .

4. Fill in the blank:  $\frac{3}{4} = \frac{?}{12}$ .

**Answer** 9Multiply top and bottom by 3:  $\frac{3 \times 3}{4 \times 3} = \frac{9}{12}$ .

5. Write an equivalent fraction for  $\frac{2}{3}$  that has a denominator of 6.

**Answer**  $\frac{4}{6}$ Multiply top and bottom by 2:  $\frac{2 \times 2}{3 \times 2} = \frac{4}{6}$ .

6. Simplify  $\frac{6}{8}$  by dividing the numerator and denominator by the same number.

**Answer**  $\frac{3}{4}$ Divide top and bottom by 2:  $\frac{6 \div 2}{8 \div 2} = \frac{3}{4}$ .

7. Simplify  $\frac{4}{12}$  to lowest terms.

**Answer**  $\frac{1}{3}$ Divide top and bottom by 4:  $\frac{4 \div 4}{12 \div 4} = \frac{1}{3}$ .

8. Simplify  $\frac{10}{15}$  to lowest terms.

**Answer**  $\frac{2}{3}$ Divide top and bottom by 5:  $\frac{10 \div 5}{15 \div 5} = \frac{2}{3}$ .

9. Are  $\frac{3}{5}$  and  $\frac{9}{15}$  equivalent? Explain how you know.

**Answer** YesMultiply  $\frac{3}{5}$  top and bottom by 3:  $\frac{3 \times 3}{5 \times 3} = \frac{9}{15}$ . They are equivalent.

10. Are  $\frac{2}{3}$  and  $\frac{6}{8}$  equivalent? Explain how you know.

**Answer** No $\frac{2}{3} = \frac{6}{9}$  when scaled by 3, not  $\frac{6}{8}$ . Also  $\frac{6}{8} = \frac{3}{4}$ , so they are not equivalent.

11. Which fraction is equivalent to  $\frac{4}{6}$ ?

**Answer A)**  $\frac{2}{3}$

Divide top and bottom by 2:  $\frac{4 \div 2}{6 \div 2} = \frac{2}{3}$ .

---

12. Find the missing number:  $\frac{5}{6} = \frac{15}{?}$ .

**Answer** 18

The numerator was multiplied by 3 ( $5 \times 3 = 15$ ), so multiply the denominator by 3 too:  $6 \times 3 = 18$ .

---

13. Maya colored  $\frac{1}{4}$  of her grid. Liam colored  $\frac{3}{12}$  of an identical grid. Did they color the same amount? Explain.

**Answer** Yes

Multiply  $\frac{1}{4}$  top and bottom by 3:  $\frac{1 \times 3}{4 \times 3} = \frac{3}{12}$ . They colored the same amount.

---

14. A pizza is cut into 8 equal slices and 4 are eaten. Write the eaten part as a fraction, then write it in lowest terms.

**Answer**  $\frac{4}{8} = \frac{1}{2}$

Eaten part is  $\frac{4}{8}$ . Divide top and bottom by 4:  $\frac{4 \div 4}{8 \div 4} = \frac{1}{2}$ .

---

15. Owen says  $\frac{2}{3}$  of a book equals  $\frac{8}{12}$  of the same book. Use equivalent fractions to check whether he is correct.

**Answer** Owen is correct

Multiply  $\frac{2}{3}$  top and bottom by 4:  $\frac{2 \times 4}{3 \times 4} = \frac{8}{12}$ . Owen is correct.