

Grade 4 - Multiplying a Fraction by a Whole Number - Answer Key

Common Core 4.NF.B.4a, 4.NF.B.4b, 4.NF.B.4c · maths-pdf.fr/en/

Use this answer key to check each problem on the worksheet. Every solution shows the multiplication of the whole number and the numerator, plus the conversion to a mixed number when it is needed.

Grade 4 · Common Core State Standards: **4.NF.B.4a, 4.NF.B.4b, 4.NF.B.4c**

Exercise 1 - Three fourths

Three fourths is 3 pieces of one fourth.

Answer: $\frac{3}{4} = 3 \times \frac{1}{4}$.

Exercise 2 - Five sixths

$\frac{5}{6} = 5 \times \frac{1}{6}$.

As a sum: $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6}$.

Answer: $5 \times \frac{1}{6}$.

Exercise 3 - Four fifths

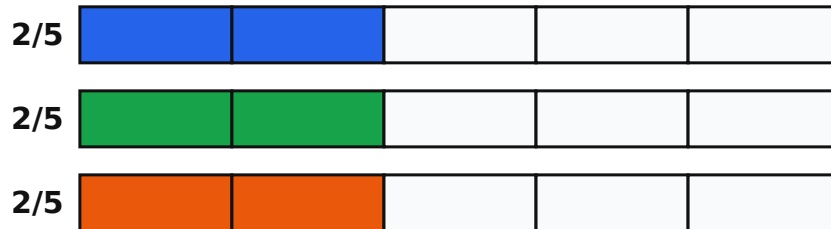
$4 \times 1 = 4$, and the denominator stays 5.

Answer: $\frac{4}{5}$.

Exercise 4 - Three groups of two fifths

$3 \times 2 = 6$, so the product is $\frac{6}{5}$.

$\frac{6}{5} = 1\frac{1}{5}$.



6 fifths in all.

Answer: $\frac{6}{5} = 1\frac{1}{5}$.

Exercise 5 - Two groups of three eighths

$2 \times 3 = 6$, so $\frac{6}{8}$.

Answer: $\frac{6}{8}$.

Exercise 6 - Five thirds

$5 \times 1 = 5$, so $\frac{5}{3}$.

$5 \div 3 = 1$ remainder 2.

Answer: $1\frac{2}{3}$.

Exercise 7 - Four groups of three tenths

$4 \times 3 = 12$, so $\frac{12}{10}$.

$12 \div 10 = 1$ remainder 2.

Answer: $1\frac{2}{10}$.

Exercise 8 - A whole number answer

$6 \times 2 = 12$, so $\frac{12}{3}$.

$12 \div 3 = 4$.

Answer: **4**.

Exercise 9 - Three groups of five sixths

$$3 \times 5 = 15, \text{ so } \frac{15}{6}.$$

$$15 \div 6 = 2 \text{ remainder } 3.$$

$$\text{Answer: } 2\frac{3}{6}.$$

Exercise 10 - Seven groups of three fourths

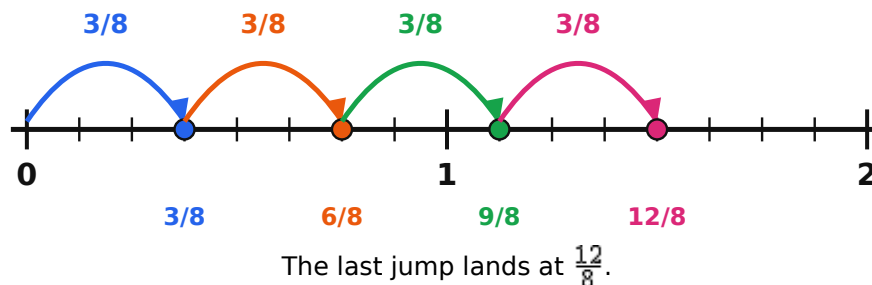
$$7 \times 3 = 21, \text{ so } \frac{21}{4}.$$

$$21 \div 4 = 5 \text{ remainder } 1.$$

$$\text{Answer: } 5\frac{1}{4}.$$

Exercise 11 - Number line jumps

Each jump is $\frac{3}{8}$. The jumps land at $\frac{3}{8}$, $\frac{6}{8}$, $\frac{9}{8}$ and $\frac{12}{8}$.



$$\frac{12}{8} = 1\frac{4}{8}.$$

$$\text{Answer: } \frac{12}{8} = 1\frac{4}{8}.$$

Exercise 12 - Complete the product

$$8 \times 3 = 24, \text{ so } \frac{24}{12}.$$

$$24 \div 12 = 2.$$

$$\text{Answer: } \frac{24}{12} = 2.$$

Exercise 13 - Two ways to write nine fourths

Nine fourths is 9 pieces of $\frac{1}{4}$: $9 \times \frac{1}{4}$.

Also $3 \times \frac{3}{4} = \frac{9}{4}$.

Answer: $9 \times \frac{1}{4}$ **and** $3 \times \frac{3}{4}$.

Exercise 14 - Nine groups of two fifths

$9 \times 2 = 18$, so $\frac{18}{5}$.

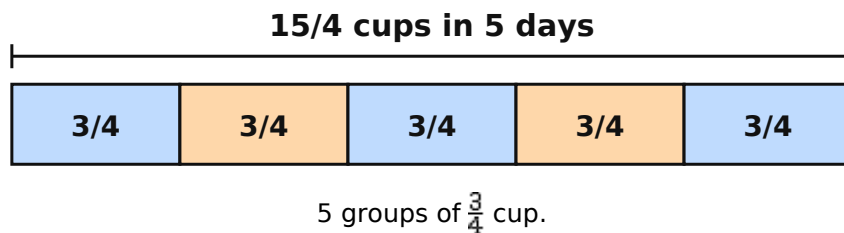
$18 \div 5 = 3$ remainder 3.

Answer: $3\frac{3}{5}$.

Exercise 15 - Glasses of milk

$5 \times \frac{3}{4} = \frac{15}{4}$.

$15 \div 4 = 3$ remainder 3.



Answer: $3\frac{3}{4}$ **cups**.

Exercise 16 - Sugar for cookies

$4 \times \frac{2}{3} = \frac{8}{3}$.

$8 \div 3 = 2$ remainder 2.

Answer: $2\frac{2}{3}$ **cups**.

Exercise 17 - Training runs

$$6 \times \frac{3}{8} = \frac{18}{8}.$$

$$18 \div 8 = 2 \text{ remainder } 2.$$

Answer: $2\frac{2}{8}$ **miles.**

Exercise 18 - Ribbon for friends

$$4 \times \frac{5}{6} = \frac{20}{6}.$$

$$20 \div 6 = 3 \text{ remainder } 2.$$

Answer: $3\frac{2}{6}$ **yards.**

Exercise 19 - Juice for glasses

$$\text{Juice needed: } 6 \times \frac{3}{4} = \frac{18}{4} = 4\frac{2}{4} \text{ cups.}$$

$$\text{Compare with 5 cups: } 5 = \frac{20}{4} \text{ and } \frac{20}{4} - \frac{18}{4} = \frac{2}{4}.$$

Answer: **Yes, enough.** $\frac{2}{4}$ **cup is left.**

Exercise 20 - Peaches at the market

$$\text{Noah: } 7 \times \frac{3}{4} = \frac{21}{4}. \text{ Mei: } 5 \times \frac{3}{4} = \frac{15}{4}.$$

$$\text{Together: } \frac{21}{4} + \frac{15}{4} = \frac{36}{4} = 9.$$

$$\text{Check: } 12 \times \frac{3}{4} = \frac{36}{4} = 9.$$

Answer: **9 pounds.**