

Multiplication of fractions

Multiply the numerators	$\frac{2}{5} \times \frac{3}{4} = \frac{6}{20}$
Multiply the denominators	$\frac{2}{5} \times \frac{3}{4} = \frac{6}{20}$
Reduce the fraction if necessary	$\frac{6}{20} = \frac{3}{10}$

MULTIPLYING FRACTIONS			
Remember 1. Multiply 2. Multiply 3. Simplify	Fraction multiplied by a fraction	Whole number multiplied by a fraction	Fraction multiplied by a mixed number
Step 1: Write whole number as fraction; write mixed number as improper fraction.	$\frac{2}{3} \times \frac{3}{4}$	$9 \times \frac{2}{5}$ $\downarrow$ $\frac{9}{1} \times \frac{2}{5}$	$\frac{2}{3} \times 2\frac{1}{3}$ $\downarrow$ $\frac{2}{3} \times \frac{7}{3}$
Step 2: Multiply the numerators	$\frac{2}{3} \times \frac{3}{4} = \frac{6}{12}$	$\frac{9}{1} \times \frac{2}{5} = \frac{18}{5}$	$\frac{2}{3} \times \frac{7}{3} = \frac{14}{9}$
Step 3: Multiply the denominators	$\frac{2}{3} \times \frac{3}{4} = \frac{6}{12}$	$\frac{9}{1} \times \frac{2}{5} = \frac{18}{5}$	$\frac{2}{3} \times \frac{7}{3} = \frac{14}{9}$
Step 4: Write answer in simplest terms	$\frac{6}{12} = \frac{1}{2}$	$\frac{18}{5} = 3\frac{3}{5}$	$\frac{14}{9} = 1\frac{5}{9}$

Exercise 7 - 27.04.2020 and 28.04.2020

Complete the following exercises in your book (SHOW ALL CALCULATIONS)

Multiply these fractions together. Your answer should be given in simplest form, and written as a proper fraction or mixed number (not as an improper fraction).

- 1) $\frac{2}{5} \times \frac{1}{3} = \frac{2}{15}$ 2) $\frac{4}{7} \times \frac{3}{4} = \frac{3}{7}$ 3) $\frac{3}{8} \times \frac{5}{6} = \frac{5}{16}$
- 4) $\frac{3}{9} \times \frac{2}{3} = \frac{2}{9}$ 5) $\frac{5}{6} \times 8 = 6\frac{2}{3}$ 6) $\frac{3}{11} \times \frac{2}{3} = \frac{2}{11}$
- 7) $\frac{6}{7} \times 5 = 4\frac{2}{7}$ 8) $\frac{1}{6} \times \frac{8}{9} = \frac{4}{27}$ 9) $\frac{3}{10} \times \frac{4}{5} = \frac{6}{25}$
- 10) $\frac{2}{11} \times \frac{3}{8} = \frac{3}{44}$ 11) $9 \times \frac{5}{7} = 6\frac{3}{7}$ 12) $\frac{4}{3} \times \frac{3}{10} = \frac{2}{5}$
- 13) $\frac{7}{4} \times \frac{8}{9} = 1\frac{5}{9}$ 14) $\frac{4}{13} \times \frac{3}{5} = \frac{12}{65}$ 15) $\frac{8}{11} \times 7 = 5\frac{1}{11}$
- 16) $\frac{8}{3} \times \frac{4}{11} = \frac{32}{33}$ 17) $13 \times \frac{3}{8} = 4\frac{7}{8}$ 18) $\frac{5}{14} \times \frac{4}{5} = \frac{2}{7}$
- 19) $\frac{7}{11} \times 9 = 5\frac{8}{11}$ 20) $\frac{5}{8} \times \frac{7}{5} = \frac{7}{8}$ 21) $\frac{3}{13} \times \frac{8}{7} = \frac{24}{91}$
- 22) $\frac{6}{5} \times \frac{7}{12} = \frac{7}{10}$ 23) $\frac{2}{11} \times \frac{9}{4} = \frac{9}{22}$ 24) $\frac{8}{13} \times 12 = 7\frac{5}{13}$

Memorandum - 29.04.2020

Exercise 8

$$\begin{aligned} 1) \quad & 4\frac{9}{10} \times 4\frac{1}{2} \\ &= \frac{49}{10} \times \frac{9}{2} \\ &= \frac{441}{20} \end{aligned}$$

$$\begin{aligned} 2) \quad & 2\frac{1}{2} \times 3\frac{3}{5} \\ &= \frac{5}{2} \times \frac{18}{5} \\ &= \frac{90}{10} \\ &= \frac{9}{1} = 9 \end{aligned}$$

$$\begin{aligned} 3) \quad & 2\frac{1}{2} \times 4\frac{1}{3} \\ &= \frac{5}{2} \times \frac{13}{3} \\ &= \frac{65}{6} \end{aligned}$$

$$\begin{aligned} 4) \quad & 3\frac{1}{2} \times 3\frac{2}{3} \\ &= \frac{7}{2} \times \frac{11}{3} \\ &= \frac{77}{6} \end{aligned}$$

$$\begin{aligned} 5) \quad & 3\frac{1}{2} \times 2\frac{2}{3} \\ &= \frac{7}{2} \times \frac{8}{3} \\ &= \frac{56 \div 2}{6 \div 2} \\ &= \frac{28}{3} \end{aligned}$$

$$\begin{aligned} 6) \quad & 2\frac{7}{10} \times 4\frac{3}{4} \\ &= \frac{27}{10} \times \frac{19}{4} \\ &= \frac{513}{40} \end{aligned}$$

$$\begin{aligned} 7) \quad & 2\frac{1}{2} \times 4\frac{4}{5} \\ &= \frac{5}{2} \times \frac{24}{5} \\ &= \frac{120}{10} \\ &= \frac{12}{1} \\ &= 12 \end{aligned}$$

$$\begin{aligned} 8) \quad & 4\frac{4}{5} \times 4\frac{1}{3} \\ &= \frac{24}{5} \times \frac{13}{3} \\ &= \frac{312}{15} \\ &= \frac{104}{5} \end{aligned}$$

$$\begin{aligned} 9) \quad & 4\frac{1}{2} \times 3\frac{1}{5} \\ &= \frac{9}{2} \times \frac{16}{5} \\ &= \frac{144}{10} \\ &= \frac{72}{5} \end{aligned}$$

$$\begin{aligned} 10) \quad & 2\frac{1}{2} \times 2\frac{1}{4} \\ &= \frac{5}{2} \times \frac{9}{4} \\ &= \frac{45}{8} \end{aligned}$$

Mixed Fraction Sum

Memorandum - 30.04.2020

Exercise 9

$$1). 1\frac{1}{2} + 2\frac{2}{3} - 3\frac{3}{4}$$
$$= \frac{3 \times 6}{2 \times 6} + \frac{8 \times 4}{3 \times 4} - \frac{15 \times 3}{4 \times 3}$$

$$= \frac{18 + 32 - 45}{12}$$

$$= \frac{50 - 45}{12}$$

$$= \frac{5}{12}$$

$$2). 1\frac{1}{5} + 2\frac{1}{3} \times \frac{3}{4}$$
$$= \frac{6}{5} + \left(\frac{7}{3} \times \frac{3}{4} \right)$$

$$= \frac{6 \times 12}{5 \times 12} + \frac{21 \times 3}{12 \times 3}$$

$$= \frac{72 + 105}{60}$$

$$= \frac{177 \div 3}{60 \div 3} = \frac{59}{20}$$

$$3). 3\frac{2}{3} \times 1\frac{3}{4} - 3\frac{1}{3}$$
$$= \left(\frac{11}{3} \times \frac{7}{4} \right) - \frac{10}{3}$$

$$= \frac{77 \times 1}{12 \times 1} - \frac{10 \times 4}{3 \times 4}$$

$$= \frac{77 - 40}{12}$$

$$= \frac{37}{12}$$

$$4). 1\frac{3}{5} + 2\frac{1}{3} - 1\frac{4}{15}$$
$$= \frac{8 \times 3}{5 \times 3} + \frac{7 \times 5}{3 \times 5} - \frac{19}{15}$$

$$= \frac{24}{15} + \frac{35}{15} - \frac{19}{15}$$

$$= \frac{59 - 19}{15}$$

$$= \frac{40 \div 5}{15 \div 5} = \frac{8}{3}$$

$$5). 2\frac{2}{5} \times 1\frac{2}{3} \times \frac{1}{6}$$
$$= \frac{12}{5} \times \frac{5}{3} \times \frac{1}{6}$$

$$= \frac{60 \div 30}{90 \div 30}$$

$$= \frac{2}{3}$$

$$6). 6\frac{1}{5} + 2\frac{1}{4} - 1\frac{7}{10}$$

$$= \frac{31 \times 4}{5 \times 4} + \frac{9 \times 5}{4 \times 5} - \frac{17 \times 2}{10 \times 2}$$

$$= \frac{124 + 45 - 34}{20}$$

$$= \frac{169 - 34}{20}$$

$$= \frac{135 \div 5}{20 \div 5} = \frac{27}{4}$$