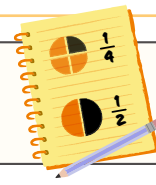


# Multiplying Fractions

## ANSWERS



### Section A Calculate.

1) $\frac{1}{3} \times \frac{3}{8} = \frac{1}{8}$	4) $\frac{3}{8} \times 2 = \frac{3}{4}$	7) $-\frac{2}{3} \times -\frac{3}{8} = \frac{1}{4}$
2) $\frac{1}{3}$ of $\frac{3}{8} = \frac{1}{8}$	5) $\frac{2}{3} \times \frac{3}{8} = \frac{1}{4}$	8) $\left(\frac{3}{8}\right)^2 = \frac{9}{64}$
3) $\frac{3}{8} \times \frac{1}{3} = \frac{1}{8}$	6) $-\frac{2}{3} \times \frac{3}{8} = -\frac{1}{4}$	9) $\frac{3}{8} \times 2\frac{1}{4} = \frac{27}{32}$

### Section B Complete the multiplication grid.

x	$\frac{1}{2}$	$\frac{3}{2}$	$-\frac{4}{5}$
9	$\frac{9}{2}$ $4\frac{1}{2}$	$\frac{27}{2}$ $13\frac{1}{2}$	$-\frac{36}{5}$ $-7\frac{1}{5}$
$-\frac{4}{5}$	$-\frac{2}{5}$	$-\frac{12}{10}$ $-1\frac{1}{5}$	$\frac{16}{25}$
$3\frac{2}{5}$	$\frac{17}{10}$ $1\frac{7}{10}$	$\frac{51}{10}$	$-\frac{68}{25}$ $-2\frac{18}{25}$

### Section C Fill the gaps.

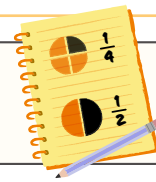
1) $\frac{2}{5} \times \frac{3}{7} = \frac{6}{35}$	5) $\frac{2}{3} \times \frac{7}{3} = 1\frac{5}{9}$	9) $\frac{3}{4} \times \frac{3}{5} \times \frac{1}{7} = \frac{9}{140}$
2) $\frac{2}{7} \times \frac{2}{9} = \frac{4}{63}$	6) $\frac{2}{9} \times \frac{6}{11} = \frac{4}{33}$	10) $1\frac{4}{5} \times 1\frac{1}{3} = 2\frac{2}{5}$
3) $\frac{3}{10} \times \frac{1}{2} = \frac{3}{20}$	7) $\frac{4}{5} \times \frac{3}{10} = \frac{6}{25}$	11) $-\frac{4}{5} \times -\frac{3}{7} = \frac{12}{35}$
4) $\frac{5}{7} \times \frac{2}{11} = \frac{10}{77}$	8) $\frac{1}{2} \times \frac{2}{3} \times \frac{3}{4} = \frac{1}{4}$	12) $\frac{2}{3} \times \frac{3}{2} = 1$

### Section D Spot and explain the mistakes.

<p>1) <math>\frac{1}{7} \times \frac{1}{3} = \frac{2}{21}</math></p> <p>The numerators have been added rather than multiplied.</p> <p>The correct answer is <math>\frac{1}{21}</math>.</p>	<p>2) <math>3 \times \frac{2}{5} = \frac{6}{15}</math></p> <p>The numerator and the denominator have both been multiplied by 3, only the numerator should be.</p> <p><math>\frac{6}{15}</math> is equivalent to <math>\frac{2}{5}</math>.</p> <p>The correct answer is <math>\frac{6}{5}</math>.</p>	<p>3) <math>\frac{2}{5} \times \frac{1}{3} = \frac{6}{15} \times \frac{1}{15}</math></p> <p><math>= \frac{6}{225}</math></p> <p><math>= \frac{2}{75}</math></p> <p>There is no need to find equivalent fractions with the same denominator when fractions are multiplied.</p> <p>A mistake has been made when doing this.</p> <p>The correct answer is <math>\frac{2}{15}</math>.</p>
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# Multiplying Fractions

## ANSWERS



### Section E Simplify the following.

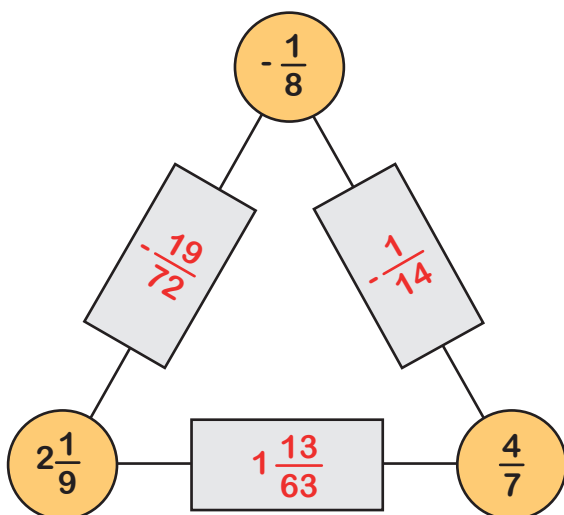
1) $\frac{a}{b} \times \frac{c}{d} = \frac{ac}{bd}$	4) $b \times \frac{c}{d} = \frac{bc}{d}$	7) $\frac{2a}{b} \times \frac{2a^2}{7b} = \frac{4a^3}{7b^2}$
2) $\frac{a}{b} \times \frac{a}{c} = \frac{a^2}{bc}$	5) $\frac{a+1}{b} \times \frac{3}{5} = \frac{3(a+1)}{5b}$	8) $\frac{a}{2} \times \frac{2}{a} = 1$
3) $\frac{a}{4} \times \frac{3}{b} = \frac{3a}{4b}$	6) $\frac{2a}{b} \times \frac{4c}{7b} = \frac{8ac}{7b^2}$	9) $a\frac{b}{c} \times \frac{a}{d} = \frac{(a^2c + ab)}{cd}$

### Section F Complete each puzzle.

1) Write down 3 fraction multiplications with an answer of  $\frac{1}{4}$ .

There are multiple answers to this. Ask your partner to check yours.

2) In the arithmagon below, the product of two fractions goes in the rectangle between them.



3) In this magic square, the product of each column, row, and diagonal is 1.

$2\frac{2}{3}$	$\frac{1}{4}$	$1\frac{1}{2}$
$\frac{9}{16}$	1	$1\frac{7}{9}$
$\frac{2}{3}$	4	$\frac{3}{8}$