Multiply Fractions

<u>Multiply Fractions</u> – There are two ways to multiply fractions.

Method 1 - Reduce first, then multiply. (easier)

$$\frac{2}{5} \times \frac{3}{4} =$$

Each fraction is already lowest terms, but 2 and 4 can be simplified diagonally.

$$\frac{\frac{1}{2}}{5} \times \frac{3}{4} =$$

 $\frac{\frac{1}{2}}{\frac{2}{5}} \times \frac{\frac{3}{4}}{\frac{2}{5}} = Cross cancel using 2 as the GCF.$ 3 and 5 cannot be reduced further.

$$\frac{1}{5}\times\frac{3}{2}=\frac{3}{10}$$

 $\frac{1}{5} \times \frac{3}{2} = \frac{3}{10}$ Multiply straight across. Double-check for lowest terms.

Method 2 – Multiply first, then reduce.

(Okay, but sometimes the fractions get too large.)

$$\frac{2}{5} \times \frac{3}{4} = \frac{6}{20}$$
 Multiply straight across.

$$= \frac{3}{10}$$

 $=\frac{3}{10}$ Reduce to lowest terms.

• Solve and show work. Shade the box if the numerator is odd and follow the path to the answer.



What percent of all volcanic activity takes place in the ocean?

$ \frac{1}{3} \times \frac{3}{8} = $	START	2.	3.	4.
$\frac{9}{11} \times \frac{22}{27} = \frac{3}{4} \times \frac{2}{9} = \frac{5}{6} \times \frac{2}{3} = \frac{6}{10} \times \frac{5}{12} =$ $9. \frac{2}{3} \times \frac{21}{1} = \frac{4}{9} \times \frac{3}{5} = \frac{11.}{\frac{8}{9} \times \frac{2}{5}} = \frac{12.}{\frac{3}{7} \times \frac{7}{9}} =$ $13. \frac{1}{4} \times \frac{1}{4} = \frac{14.}{\frac{5}{8} \times \frac{4}{10}} = \frac{15.}{\frac{3}{8} \times \frac{3}{4}} = \frac{16.}{\frac{3}{5} \times \frac{3}{8}} =$ $17. \frac{8}{10} \times \frac{15}{25} = \frac{18.}{\frac{2}{7} \times \frac{7}{10}} = \frac{19.}{\frac{3}{7} \times \frac{4}{5}} = \frac{20.}{\frac{5}{12} \times \frac{6}{7}} =$ $21. 22. 23. 24.$		$\frac{1}{3} \times \frac{5}{8} =$	$\frac{8}{9} \times \frac{3}{4} =$	$\frac{2}{3} \times \frac{4}{1} =$
$ \frac{2}{3} \times \frac{21}{1} = \frac{4}{9} \times \frac{3}{5} = \frac{8}{9} \times \frac{2}{5} = \frac{3}{7} \times \frac{7}{9} = \frac{13.}{13.} $ $ \frac{1}{4} \times \frac{1}{4} = \frac{5}{8} \times \frac{4}{10} = \frac{15.}{\frac{3}{8} \times \frac{3}{4}} = \frac{16.}{\frac{3}{5} \times \frac{3}{8}} = \frac{17.}{\frac{10}{10} \times \frac{15}{25}} = \frac{20.}{\frac{7}{7} \times \frac{7}{10}} = \frac{20.}{\frac{5}{12} \times \frac{6}{7}} = \frac{21.}{21.} $ $ \frac{2}{10} \times \frac{15}{25} = \frac{22.}{21.} $ $ \frac{3}{10} \times \frac{3}{5} = \frac{3}{7} \times \frac{4}{5} = \frac{20.}{\frac{5}{12} \times \frac{6}{7}} = \frac{21.}{21.} $	$\frac{9}{11}\times\frac{22}{27}=$			=
$ \frac{1}{4} \times \frac{1}{4} = $		$\frac{4}{9} \times \frac{3}{5} =$	$\frac{8}{9} \times \frac{2}{5} =$	
$\frac{8}{10} \times \frac{15}{25} = \qquad \qquad \frac{2}{7} \times \frac{7}{10} = \qquad \qquad \frac{3}{7} \times \frac{4}{5} = \qquad \qquad \frac{5}{12} \times \frac{6}{7} =$ 21. 22. 23. 24.		$\frac{5}{8} \times \frac{4}{10} =$	$\frac{3}{8} \times \frac{3}{4} =$	
$\begin{vmatrix} 21. & & \\ \frac{4}{6} \times \frac{5}{9} = & & \begin{vmatrix} 22. & & \\ \frac{3}{4} \times \frac{5}{6} \times \frac{8}{12} = & \\ & \frac{2}{7} \times \frac{3}{3} \times \frac{3}{7} = & \end{vmatrix} \begin{vmatrix} 24. & & \\ \frac{5}{27} \times \frac{3}{10} \times \frac{4}{9} = & \end{vmatrix}$	$\frac{8}{10} \times \frac{15}{25} =$	$\frac{2}{7} \times \frac{7}{10} =$	$\frac{3}{7} \times \frac{4}{5} =$	$\frac{5}{12} \times \frac{6}{7} =$
	$\frac{4}{6} \times \frac{5}{9} =$	$\frac{3}{4} \times \frac{5}{6} \times \frac{8}{12} =$	$\frac{23.}{\frac{2}{7}} \times \frac{3}{3} \times \frac{3}{7} =$	





90%



35%



60%

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$$\frac{\frac{1}{2}}{\frac{3}{5}} \times \frac{3}{\frac{3}{4}} =$$

Cross cancel using 2 as the GCF. 3 and 5 cannot be reduced further.

$$\frac{1}{5} \times \frac{3}{2} = \frac{3}{10}$$

 $\frac{1}{5} \times \frac{3}{2} = \frac{3}{10}$ Multiply straight across. Double-check

Method #2 - Multiply first, then reduce.

(Okay, but sometimes the fractions get too large.)

$$\frac{2}{5} \times \frac{3}{4} = \frac{6}{20}$$
 Multiply straight across.

$$=\frac{3}{10}$$

 $=\frac{3}{10}$ Reduce to lowest terms.

• Solve and show work. Shade the box if the numerator is odd and follow the path to the answer.



What percent of all volcanic activity takes place in the ocean? 90%

$\frac{1}{3} \times \frac{3}{8} = \frac{1}{8}$	$\frac{1}{3} \times \frac{5}{8} = \frac{5}{24}$	3. $\frac{8}{9} \times \frac{3}{4} = \frac{2}{3}$	4. $\frac{2}{3} \times \frac{4}{1} = 2\frac{2}{3}$
$\frac{9}{11} \times \frac{22}{27} = \frac{2}{3}$	6. $\frac{3}{4} \times \frac{2}{9} = \frac{1}{6}$	7. $\frac{5}{6} \times \frac{2}{3} = \frac{5}{9}$	8. $\frac{6}{10} \times \frac{5}{12} = \frac{1}{4}$
9. $\frac{2}{3} \times \frac{21}{1} = 14$	10. $\frac{4}{9} \times \frac{3}{5} = \frac{4}{15}$	$\frac{8}{9} \times \frac{2}{5} = \frac{16}{45}$	12. $\frac{3}{7} \times \frac{7}{9} = \frac{1}{3}$
13. $\frac{1}{4} \times \frac{1}{4} = \frac{1}{16}$	$\frac{5}{8} \times \frac{4}{10} = \frac{1}{4}$	15. $\frac{3}{8} \times \frac{3}{4} = \frac{9}{32}$	16. $\frac{3}{5} \times \frac{3}{8} = \frac{9}{40}$
$\frac{8}{10} \times \frac{15}{25} = \frac{12}{25}$	$\frac{2}{7} \times \frac{7}{10} = \frac{1}{5}$	19. $\frac{3}{7} \times \frac{4}{5} = \frac{12}{35}$	$\frac{5}{12} \times \frac{6}{7} = \frac{5}{14}$
$\frac{4}{6} \times \frac{5}{9} = \frac{10}{27}$	$\frac{3}{4} \times \frac{5}{6} \times \frac{8}{12} = \frac{5}{12}$	23. $\frac{2}{7} \times \frac{3}{3} \times \frac{3}{7} = \frac{6}{49}$	$\frac{5}{27} \times \frac{3}{10} \times \frac{4}{9} = \frac{2}{81}$



