

Reciprocal - Worksheet

Skill

Group A - Reciprocals of integers

Find the reciprocal of each of the following:

1) 2	2) 5	3) 8
4) 11	5) 1	6) 10
7) 7	8) 100	9) 330
10) 667	11) 999	12) 2340

Group B - Reciprocals of fractions

Find the reciprocal of each of the following:

1) $\frac{3}{2}$	2) $\frac{2}{3}$	3) ⁷ / ₉
4) $\frac{7}{8}$	5) $\frac{5}{4}$	6) 7 /4
7) $\frac{8}{9}$	8) $\frac{2}{10}$	9) $\frac{1}{5}$
10) $\frac{4}{8}$	11) $\frac{9}{18}$	12) $\frac{1}{6}$

Group C - Reciprocals of decimals

Find the reciprocal of each of the following:

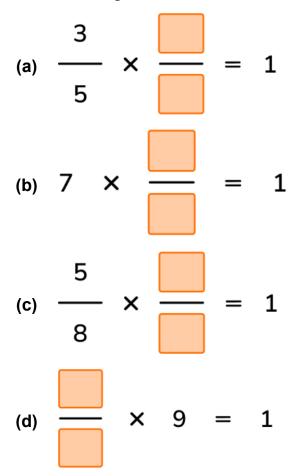
1) 1.25	2) 1.5	3) 1.75
4) 0. 6	5) 0.75	6) 1.25
7) 1.8	8) 3. 5	9) 0.25
10) 1.4	11) 3. 4	12) 2.5



Reciprocal - Worksheet

Applied

- **1)** Hetty says the reciprocal of a number is always larger than the number. Show that Hetty is wrong.
- 2) Find the missing numbers.



3) Jon thinks of a number. He then writes the reciprocal of the number. It is the same as the number he started with. What number did he think of?

4) What number does not have a reciprocal?



Reciprocal - Exam Questions

1)	Write down the reciprocal of 6	(1 mark)
2)	(a) Write down the reciprocal of $\frac{2}{5}$	
		(1)
	(b) Give your answer to part (a) as a decimal.	
		(1) (2 marks)
3)	Find the reciprocal of 0. 6	
		(1 mark)
4)	Work out the reciprocal of 100	
	Give your answer as a decimal.	
		(2 marks)
5)	Work out the reciprocal of $\frac{10}{11}$	
	Give your answer as a decimal.	

(2 marks)



Reciprocal - Answers

	Question	Answer
	Skill Questions	
Group A	Find the reciprocal of each of the following: 1) 2	1) $\frac{1}{2}$
	2) 5	2) $\frac{1}{5}$
	3) 8	3) $\frac{1}{8}$
	4) 11	4) $\frac{1}{11}$
	5) 1	5) 1
	6) 10	6) $\frac{1}{10}$
	7) 7	7) $\frac{1}{7}$
	8) 100	8) $\frac{1}{100}$
	9) 330	9) $\frac{1}{330}$
	10) 667	10) $\frac{1}{667}$
	11) 999	11) $\frac{1}{999}$
	12) 2340	12) $\frac{1}{2340}$
Group B	Find the reciprocal of each of the following:	
	1) $\frac{3}{2}$	1) $\frac{2}{3}$
	2) $\frac{2}{3}$	2) $\frac{3}{2}$ 3) $\frac{9}{7}$ 4) $\frac{8}{7}$ 5) $\frac{4}{5}$ 6) $\frac{4}{7}$ 7) $\frac{9}{8}$
	3) $\frac{7}{9}$	3) $\frac{9}{7}$
	4) $\frac{7}{8}$	4) $\frac{3}{7}$
	5) $\frac{3}{4}$	5) $\frac{4}{5}$
	6) $\frac{7}{4}$	6) $\frac{+}{7}$
	7) $\frac{3}{9}$	
	2) $\frac{2}{3}$ 3) $\frac{7}{9}$ 4) $\frac{7}{8}$ 5) $\frac{5}{4}$ 6) $\frac{7}{4}$ 7) $\frac{8}{9}$ 8) $\frac{2}{10}$ 9) $\frac{1}{5}$ 10) $\frac{4}{8}$ 11) $\frac{9}{18}$ 12) $\frac{1}{6}$	8) 5
	$(9) \frac{1}{5}$	9) 5
	$10)\frac{1}{8}$	10) 2
	$11)\frac{5}{18}$	11) 2
	12) $\frac{1}{6}$	12) 6

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Reciprocal - Answers

Group C	Find the reciprocal of each of the following:	
	1) 1.25	1) $\frac{4}{5}$
	2) 1.5	2) $\frac{2}{3}$
	3) 1.75	3) $\frac{4}{7}$
	4) 0. 6	4) $\frac{5}{3}$
	5) 0.75	5) $\frac{4}{3}$
	6) 1.25	6) $\frac{4}{5}$
	7) 1.8	6) $\frac{4}{5}$ 7) $\frac{5}{9}$
	8) 3.5	8) $\frac{2}{7}$
	9) 0.25	9) 4
	10) 1.4	10) $\frac{5}{7}$
	11) 3.4	11) $\frac{5}{17}$
	12) 2.5	11) $\frac{5}{17}$ 12) $\frac{2}{5}$



Reciprocal - Answers

	Question	Answer
	Applied Questions	
1)	Hetty says the reciprocal of a number is always larger than the number. Show that Hetty is wrong.	Any correct example e.g. the reciprocal of 2 is $\frac{1}{2}$.
2)	a) Find the missing numbers. $ \begin{array}{c} 3 \\ - \\ 5 \end{array} \times \begin{array}{c} - \\ - \\ 5 \end{array} = 1 \end{array} $	$ \begin{bmatrix} a \\ -3 \\ -5 \end{bmatrix} \times \begin{bmatrix} 5 \\ -5 \\ -3 \end{bmatrix} = 1 $
	b) $7 \times = 1$	b) $\frac{1}{7 \times \frac{1}{7}} = 1$
	$\begin{array}{c} c \\ -\frac{5}{8} \\ 8 \end{array} \times \begin{array}{c} -\frac{1}{8} \\ -\frac{1}{8} \end{array} = 1 \end{array}$	$ \begin{array}{c} c) & 5 \\ $
	$\stackrel{\text{d)}}{=} \times 9 = 1$	$\begin{array}{c} \text{d} \\ \hline 1 \\ \hline 9 \end{array} \times 9 = 1 \end{array}$
3)	Jon thinks of a number. He then writes the reciprocal of the number. It is the same as the number he started with.	1
	What number did he think of?	
4)	What number does not have a reciprocal?	0



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Reciprocal - Mark Scheme

	Question	Answer	
	Exam Questions		
1)	Write down the reciprocal of 6	$\frac{1}{6}$	(1)
2) (a)	Write down the reciprocal of $\frac{2}{5}$	(a) $\frac{5}{2}$	(1)
(b)	Give your answer to part (a) as a decimal.	(b) 2.5	(1)
3)	Find the reciprocal of 0.6	$\frac{5}{3}$	
4)	Work out the reciprocal of 100	$\frac{1}{100}$ (1)	(2)
	Give your answer as a decimal.	0.01 (1)	
5)	Work out the reciprocal of $\frac{10}{11}$	$\frac{11}{10}$ (1)	(2)
	Give your answer as a decimal.	1.1 (1)	

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