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)** $\frac{7}{9}$

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)** $\frac{1}{6}$

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.

(a) $\frac{3}{5} \times \frac{\square}{\square} = 1$

(b) $7 \times \frac{\square}{\square} = 1$

(c) $\frac{5}{8} \times \frac{\square}{\square} = 1$

(d) $\frac{\square}{\square} \times 9 = 1$

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)

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2) **(a)** Write down the reciprocal of $\frac{2}{5}$

.....

(1)

(b) Give your answer to part (a) as a decimal.

.....

(1)

(2 marks)

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3) Find the reciprocal of 0. 6

.....

(1 mark)

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4) Work out the reciprocal of 100

Give your answer as a decimal.

.....

(2 marks)

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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 **2)** 5 **3)** 8 **4)** 11 **5)** 1 **6)** 10 **7)** 7 **8)** 100 **9)** 330 **10)** 667 **11)** 999 **12)** 2340	**1)** $\frac{1}{2}$ **2)** $\frac{1}{5}$ **3)** $\frac{1}{8}$ **4)** $\frac{1}{11}$ **5)** 1 **6)** $\frac{1}{10}$ **7)** $\frac{1}{7}$ **8)** $\frac{1}{100}$ **9)** $\frac{1}{330}$ **10)** $\frac{1}{667}$ **11)** $\frac{1}{999}$ **12)** $\frac{1}{2340}$
Group B	Find the reciprocal of each of the following: **1)** $\frac{3}{2}$ **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)** $\frac{1}{6}$	**1)** $\frac{2}{3}$ **2)** $\frac{3}{2}$ **3)** $\frac{9}{7}$ **4)** $\frac{8}{7}$ **5)** $\frac{4}{5}$ **6)** $\frac{4}{7}$ **7)** $\frac{9}{8}$ **8)** 5 **9)** 5 **10)** 2 **11)** 2 **12)** 6

Reciprocal - Answers

Group C	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	**1)** $\frac{4}{5}$ **2)** $\frac{2}{3}$ **3)** $\frac{4}{7}$ **4)** $\frac{5}{3}$ **5)** $\frac{4}{3}$ **6)** $\frac{4}{5}$ **7)** $\frac{5}{9}$ **8)** $\frac{2}{7}$ **9)** 4 **10)** $\frac{5}{7}$ **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. $\frac{3}{5} \times \frac{\square}{\square} = 1$ **b)** $7 \times \frac{\square}{\square} = 1$ **c)** $\frac{5}{8} \times \frac{\square}{\square} = 1$ **d)** $\frac{\square}{\square} \times 9 = 1$	**a)** $\frac{3}{5} \times \frac{5}{3} = 1$ **b)** $7 \times \frac{1}{7} = 1$ **c)** $\frac{5}{8} \times \frac{8}{5} = 1$ **d)** $\frac{1}{9} \times 9 = 1$
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?	1
4)	What number does not have a reciprocal?	0

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 Give your answer as a decimal.	$\frac{1}{100}$ **(1)** 0.01 **(1)**	**(2)**
5)	Work out the reciprocal of $\frac{10}{11}$ Give your answer as a decimal.	$\frac{11}{10}$ **(1)** 1.1 **(1)**	**(2)**