

To find
8883 ÷ 7

1	8	8	8	3			
7	8	1	8	8	3		
1	2						
7	8	1	8	4	8	3	
1	2	6					
7	8	1	8	4	8	6	3
1	2	6	9				
7	8	1	8	4	8	6	3

Primary Recall

Can you calculate the answers to the following:

$9536 \div 8$

$5331 \div 8$

$900 \div 5$

$9254 \div 9$

$9436 \div 7$

$3474 \div 6$

$8072 \div 8$

$3603 \div 4$

$9810 \div 9$

$8480 \div 8$

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Improper Fractions and Decimals

Simple Skills

$\frac{1}{2} = 1 \div 2$

$\frac{3}{7} = 3 \div 7$

$\frac{1}{5} = \dots\dots\dots$

$\frac{3}{5} = \dots\dots\dots$

$\frac{1}{12} = \dots\dots\dots$

$\frac{7}{12} = \dots\dots\dots$

$\frac{1}{8} = \dots\dots\dots$

$\frac{5}{8} = \dots\dots\dots$

$\frac{1}{9} = \dots\dots\dots$

$\frac{7}{9} = \dots\dots\dots$

Application

$\frac{2}{5} = \frac{1}{5} \text{ of } 2 = 2 \div 5 = 0.4$

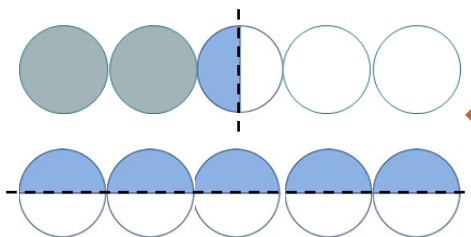
$$\begin{array}{r} 0.4 \\ 5 \overline{)2.0} \end{array}$$

Can you change these fractions in to decimals?

$\frac{1}{5} \quad \frac{1}{8} \quad \frac{1}{16}$

$\frac{3}{5} \quad \frac{7}{8} \quad \frac{11}{16}$

Conversion Corner



These two pictures above demonstrate how 5 circle can be split exactly in half. However, can you see how the pictures show that the following is true?

$$2\frac{1}{2} = \frac{5}{2}$$

Real applications

Find the **best** for of the answer for each of these division problems (use one of the three ways).

- Frank cut 30 metres of string in to eight pieces of equal length. What was the length of each piece?
- How many 8p piles can be made from 70 one pence coins?
- £45 was split equally between a family of 6. How much did each person get?
- Mr Norbury was putting up a 43m long fence. He used 5 posts spaced equally. What was the distance between each post?

Investigation



What answer does the calculator show for

$\frac{1}{11}, \frac{2}{11}, \frac{3}{11}, \frac{4}{11}, \frac{5}{11}?$

What do you think the calculator will show for

$\frac{6}{11}, \frac{7}{11}, \frac{8}{11}, \frac{9}{11}, \frac{10}{11}$

Investigate the decimal form of

$\frac{1}{99}, \frac{2}{99}, \frac{3}{99}, \dots$

Improper I

Can you apply the method you have learnt to convert these improper fractions in to decimal numbers?

$\frac{25}{4} \quad \frac{28}{5} \quad \frac{51}{6}$

Different representation

Here are **three ways** of expressing the answer to $19 \div 4$

(a) with a remainder $\longrightarrow 19 \div 4 = 4 \text{ r } 3$

(b) as a mixed number $\longrightarrow 19 \div 4 = 4\frac{3}{4}$

(c) in decimal form $\longrightarrow 19 \div 4 = 4.75$

Give the answer to the following in these three ways:

a) $7 \div 2$ b) $17 \div 4$ c) $18 \div 5$ d) $15 \div 6$

e) $11 \div 4$ f) $29 \div 5$ g) $42 \div 8$ h) $36 \div 10$

Improper II

$$\frac{7}{3} = 7 \div 3 = 2 \text{ r } 1 = 2\frac{1}{3}$$

Change the following improper fractions to mixed fractions:

$\frac{9}{2} \quad \frac{46}{7} \quad \frac{71}{8}$

Order Matters

Put these in ascending order:

$5\frac{3}{8}, \frac{42}{8}, 5.32$



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