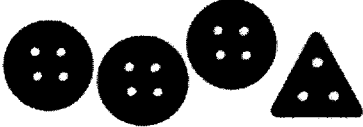


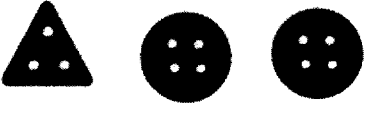

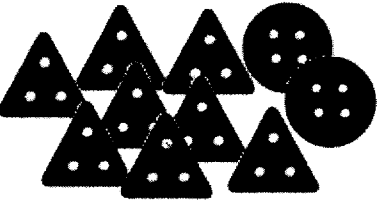
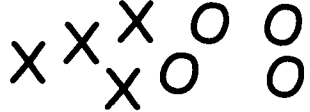
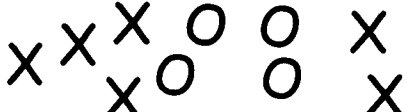
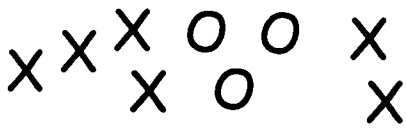
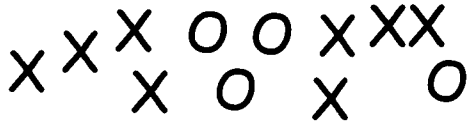
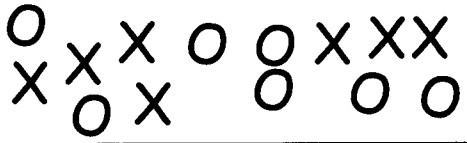
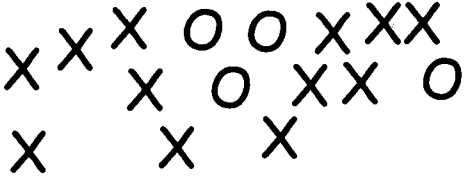


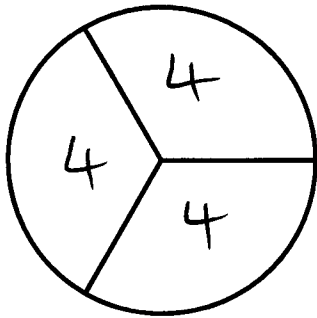
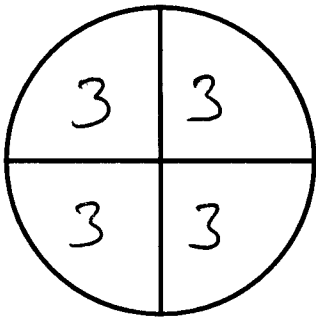
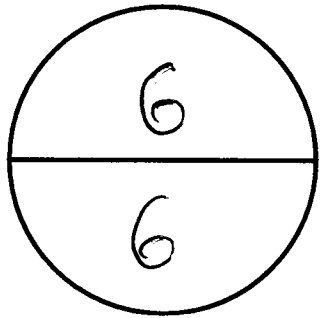
Page	Title	Description
1	Writing one quantity as a fraction of another	Using diagrams
2	Fractions of 12 and 18	Finding fraction of a quantity
3	Find the fractions of each of these numbers	Find a fraction of a number
4	Equivalent fractions	Use diagrams to find equivalent fractions
5	Equivalent fractions and Cancelling down	Find equivalent fractions
6	Adding and Subtracting fractions with different denominators. Introduction	Choose from a table of fractions so that the sum can be completed
7	Add and take different denominators	Use a tables grid to find common denominators
8	Fraction Activities	Mixed adds and takes
9	Mixed fraction multiplication	Multiplication of various types of fractions
10	Fraction Division	Division with various types of fractions
11	Fractions Revision of Methods	Practise add, take, times, divide, compare and fraction of a quantity

Writing one Quantity as a fraction of another

Buttons	Fraction Round	Fraction Triangular
	$\frac{3}{4}$	$\frac{1}{4}$
	$\frac{2}{4} = \frac{1}{2}$	$\frac{2}{4} = \frac{1}{2}$
	$\frac{2}{5}$	$\frac{3}{5}$
	$\frac{2}{3}$	$\frac{1}{3}$
	$\frac{2}{6} = \frac{1}{3}$	$\frac{4}{6} = \frac{2}{3}$
	$\frac{2}{10} = \frac{1}{5}$	$\frac{8}{10} = \frac{4}{5}$

X's and O's	Fraction X's	Cancelled down
	$\frac{4}{8} = \frac{1}{2}$	$\frac{4}{8} = \frac{1}{2}$
	$\frac{6}{10} = \frac{3}{5}$	$\frac{4}{10} = \frac{2}{5}$
	$\frac{6}{9} = \frac{2}{3}$	$\frac{3}{9} = \frac{1}{3}$
	$\frac{8}{12} = \frac{2}{3}$	$\frac{4}{12} = \frac{1}{3}$
	$\frac{7}{14} = \frac{1}{2}$	$\frac{7}{14} = \frac{1}{2}$
	$\frac{12}{16} = \frac{3}{4}$	$\frac{4}{16} = \frac{1}{4}$

12



$$\frac{1}{2} = 6$$

$$\frac{1}{4} = 3$$

$$\frac{1}{3} = 4$$

$$\frac{2}{2} = 12$$

$$\frac{2}{4} = 6$$

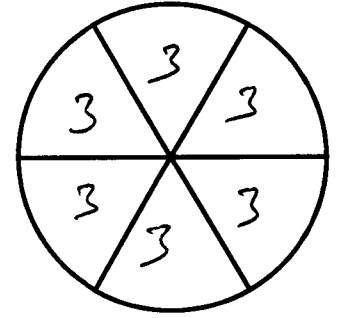
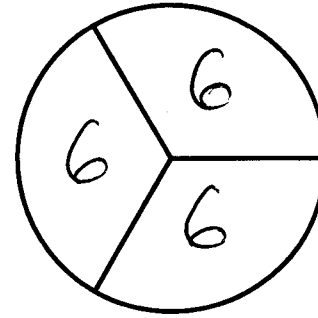
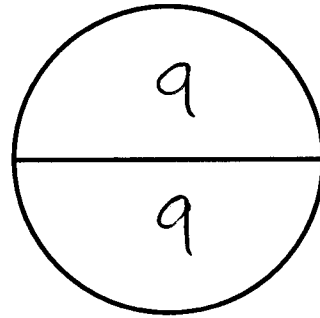
$$\frac{2}{3} = 8$$

$$\frac{3}{4} = 9$$

$$\frac{3}{3} = 12$$

$$\frac{4}{4} = 12$$

18



$$\frac{1}{2} = 9$$

$$\frac{1}{3} = 6$$

$$\frac{1}{6} = 3 \quad \frac{4}{6} = 12$$

$$\frac{2}{2} = 18$$

$$\frac{2}{3} = 12$$

$$\frac{2}{6} = 6 \quad \frac{5}{6} = 15$$

$$\frac{3}{3} = 18$$

$$\frac{3}{6} = 9 \quad \frac{6}{6} = 18$$

②

Find the Fractions of each of these numbers

12

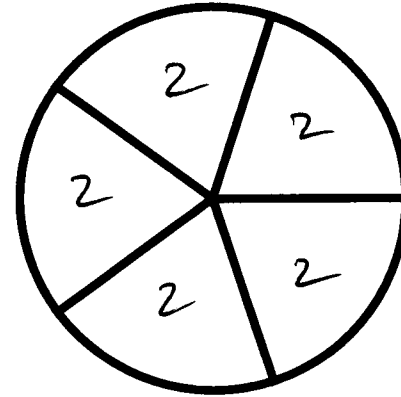
$$\frac{1}{2} = 6$$
$$\frac{1}{4} = 3$$

$$\frac{3}{4} = 9$$
$$\frac{4}{4} = 12$$

15

$$\frac{1}{3} = 5$$
$$\frac{2}{3} = 10$$
$$\frac{3}{3} = 15$$

Place 10 counters into the circle below, so that each segment has the same amount.



$$\frac{1}{5} = 2$$
$$\frac{2}{5} = 4$$
$$\frac{3}{5} = 6$$
$$\frac{4}{5} = 8$$

20

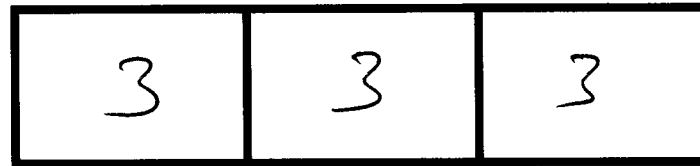
$$\frac{1}{2} = 10$$
$$\frac{1}{4} = 5$$

$$\frac{3}{4} = 15$$
$$\frac{4}{4} = 20$$

18

$$\frac{1}{3} = 6$$
$$\frac{2}{3} = 12$$
$$\frac{3}{3} = 18$$

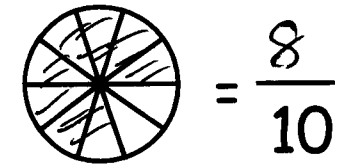
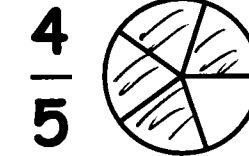
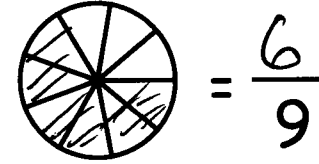
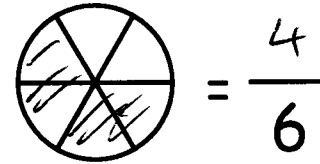
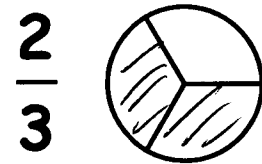
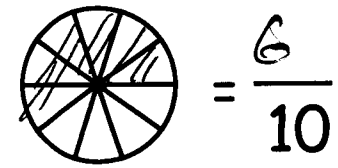
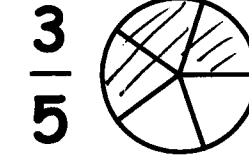
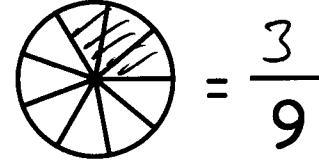
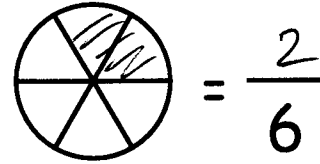
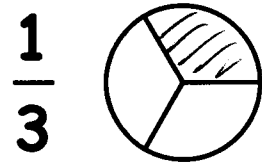
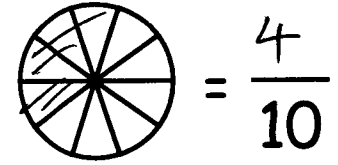
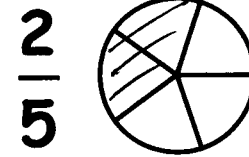
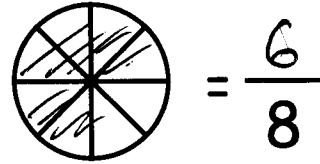
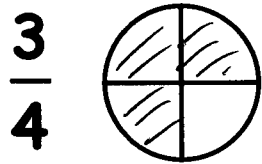
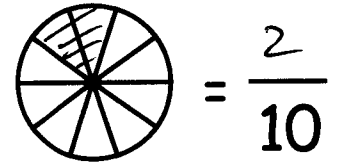
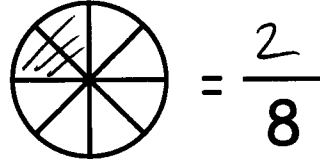
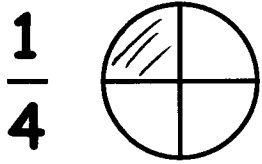
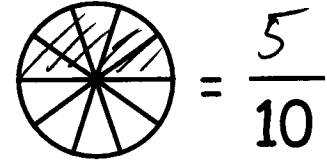
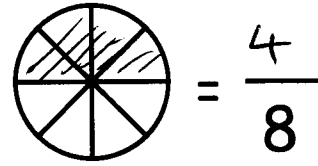
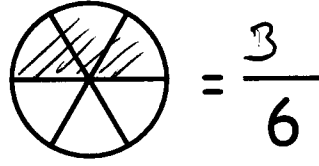
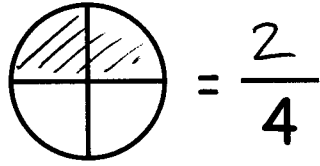
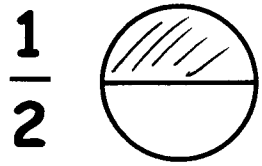
Place 9 counters into the pattern below, so that each segment has the same amount.



$$\frac{1}{3} = 3$$
$$\frac{2}{3} = 6$$
$$\frac{3}{3} = 9$$

3

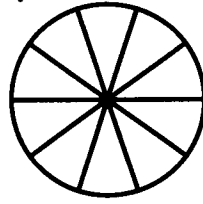
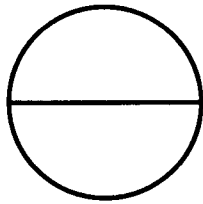
Equivalent Fractions



4

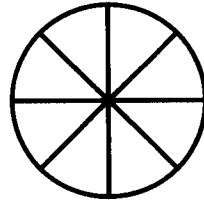
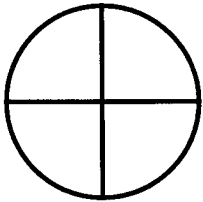
Equivalent Fractions

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



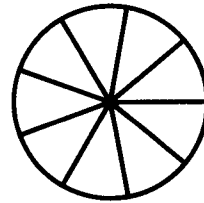
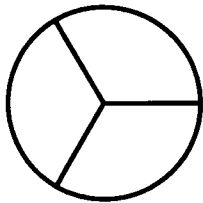
$$\frac{3}{4} = \frac{9}{12}$$

$$\frac{3}{4} = \frac{6}{8}$$



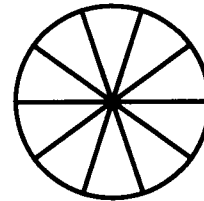
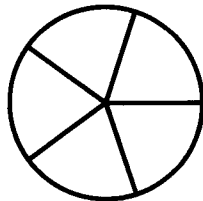
$$\frac{2}{5} = \frac{6}{15}$$

$$\frac{2}{3} = \frac{6}{9}$$



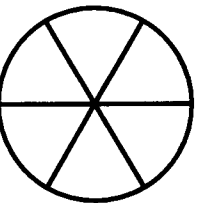
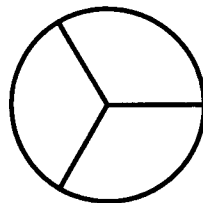
$$\frac{4}{7} = \frac{12}{21}$$

$$\frac{2}{5} = \frac{4}{10}$$



$$\frac{2}{3} = \frac{8}{12}$$

$$\frac{1}{3} = \frac{2}{6}$$



$$\frac{4}{5} = \frac{12}{15}$$

Cancelling fractions down

$$\frac{6}{12} = \frac{1}{2}$$

$$\frac{9}{12} = \frac{3}{4}$$

$$\frac{6}{8} = \frac{3}{4}$$

$$\frac{6}{9} = \frac{2}{3}$$

$$\frac{15}{20} = \frac{3}{4}$$

$$\frac{15}{18} = \frac{5}{6}$$

$$\frac{8}{24} = \frac{1}{3}$$

$$\frac{8}{10} = \frac{4}{5}$$

$$\frac{12}{14} = \frac{6}{7}$$

$$\frac{7}{14} = \frac{1}{2}$$

⑤

Adding and Subtracting Fractions

	$\times \frac{2}{2}$	$\times \frac{3}{3}$	$\times \frac{4}{4}$	$\times \frac{5}{5}$
$\frac{1}{2}$	$\frac{2}{4}$	$\frac{3}{6}$	$\frac{4}{8}$	$\frac{5}{10}$
$\frac{1}{3}$	$\frac{2}{6}$	$\frac{3}{9}$	$\frac{4}{12}$	$\frac{5}{15}$
$\frac{2}{3}$	$\frac{4}{6}$	$\frac{6}{9}$	$\frac{8}{12}$	$\frac{10}{15}$
$\frac{1}{4}$	$\frac{2}{8}$	$\frac{3}{12}$	$\frac{4}{16}$	$\frac{5}{20}$
$\frac{3}{4}$	$\frac{6}{8}$	$\frac{9}{12}$	$\frac{12}{16}$	$\frac{15}{20}$
$\frac{1}{5}$	$\frac{2}{10}$	$\frac{3}{15}$	$\frac{4}{20}$	$\frac{5}{25}$
$\frac{2}{5}$	$\frac{4}{10}$	$\frac{6}{15}$	$\frac{8}{20}$	$\frac{10}{25}$
$\frac{3}{5}$	$\frac{6}{10}$	$\frac{9}{15}$	$\frac{12}{20}$	$\frac{15}{25}$
$\frac{4}{5}$	$\frac{8}{10}$	$\frac{12}{15}$	$\frac{16}{20}$	$\frac{20}{25}$
$\frac{1}{10}$	$\frac{2}{20}$	$\frac{3}{30}$	$\frac{4}{40}$	$\frac{5}{50}$
$\frac{3}{10}$	$\frac{6}{20}$	$\frac{9}{30}$	$\frac{12}{40}$	$\frac{15}{50}$
$\frac{7}{10}$	$\frac{14}{20}$	$\frac{21}{30}$	$\frac{28}{40}$	$\frac{35}{50}$
$\frac{9}{10}$	$\frac{18}{20}$	$\frac{27}{30}$	$\frac{36}{40}$	$\frac{45}{50}$

$$\frac{1}{2} + \frac{1}{3} = \frac{3}{6} + \frac{2}{6} = \frac{5}{6}$$

$$\frac{1}{2} - \frac{1}{3} = \frac{3}{6} - \frac{2}{6} = \frac{1}{6}$$

$$\frac{2}{3} + \frac{1}{5} = \frac{10}{15} + \frac{3}{15} = \frac{13}{15}$$

$$\frac{2}{3} - \frac{1}{5} = \frac{10}{15} - \frac{3}{15} = \frac{7}{15}$$

$$\frac{3}{4} + \frac{2}{3} = \frac{9}{12} + \frac{8}{12} = \frac{17}{12}$$

$$\frac{3}{4} - \frac{2}{3} = \frac{9}{12} - \frac{8}{12} = \frac{1}{12}$$

$$\frac{3}{4} + \frac{2}{5} = \frac{15}{20} + \frac{8}{20} = \frac{23}{20}$$

$$\frac{3}{4} - \frac{2}{5} = \frac{15}{20} - \frac{8}{20} = \frac{7}{20}$$

$$\frac{3}{5} + \frac{3}{10} = \frac{6}{10} + \frac{3}{10} = \frac{9}{10}$$

$$\frac{3}{5} - \frac{3}{10} = \frac{6}{10} - \frac{3}{10} = \frac{3}{10}$$

$$\frac{7}{10} + \frac{1}{2} = \frac{7}{10} + \frac{5}{10} = \frac{12}{10}$$

$$\frac{7}{10} - \frac{1}{2} = \frac{7}{10} - \frac{5}{10} = \frac{2}{10} = \frac{1}{5}$$

$$\frac{1}{2} + \frac{2}{5} = \frac{5}{10} + \frac{4}{10} = \frac{9}{10}$$

$$\frac{1}{2} - \frac{2}{5} = \frac{5}{10} - \frac{4}{10} = \frac{1}{10}$$

$$\frac{3}{4} + \frac{1}{10} = \frac{15}{20} + \frac{2}{20} = \frac{17}{20}$$

$$\frac{3}{4} - \frac{1}{10} = \frac{15}{20} - \frac{2}{20} = \frac{13}{20}$$

$$\frac{9}{10} + \frac{1}{4} = \frac{18}{20} + \frac{5}{20} = \frac{23}{20}$$

$$\frac{9}{10} - \frac{1}{4} = \frac{18}{20} - \frac{5}{20} = \frac{13}{20}$$

$$\frac{4}{5} + \frac{1}{2} = \frac{8}{10} + \frac{5}{10} = \frac{13}{10}$$

$$\frac{4}{5} - \frac{1}{2} = \frac{8}{10} - \frac{5}{10} = \frac{3}{10}$$

⑥

Add and Take different denominators

x	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

$$\frac{3}{4} + \frac{1}{6}$$

$$\frac{9}{12} + \frac{2}{12} = \frac{11}{12}$$

$$\frac{2}{3} + \frac{2}{7}$$

$$\frac{14}{21} + \frac{6}{21} = \frac{20}{21}$$

$$\frac{3}{5} + \frac{3}{8}$$

$$\frac{24}{40} + \frac{15}{40} = \frac{39}{40}$$

$$\frac{4}{9} + \frac{1}{6}$$

$$\frac{8}{18} + \frac{3}{18} = \frac{11}{18}$$

$$\frac{5}{6} + \frac{3}{10}$$

$$\frac{25}{30} + \frac{9}{30} = \frac{34}{30}$$

$$\frac{3}{4} - \frac{1}{6}$$

$$7/12$$

$$\frac{2}{3} - \frac{2}{7}$$

$$8/21$$

$$\frac{3}{5} - \frac{3}{8}$$

$$9/40$$

$$\frac{4}{9} - \frac{1}{6}$$

$$5/18$$

$$\frac{5}{6} - \frac{3}{10}$$

$$16/30$$

$$\frac{5}{7} + \frac{2}{5}$$

$$\frac{25}{35} + \frac{14}{35} = \frac{39}{35}$$

$$\frac{1}{2} + \frac{1}{6}$$

$$\frac{3}{6} + \frac{1}{6} = \frac{4}{6} = 2/3$$

$$\frac{7}{10} + \frac{3}{8}$$

$$\frac{28}{40} + \frac{15}{40} = \frac{43}{40}$$

$$\frac{5}{8} + \frac{1}{6}$$

$$\frac{15}{24} + \frac{4}{24} = \frac{19}{24}$$

$$\frac{6}{7} + \frac{1}{2}$$

$$\frac{12}{14} + \frac{7}{14} = \frac{19}{14}$$

$$\frac{5}{7} - \frac{2}{5}$$

$$11/35$$

$$\frac{1}{2} - \frac{1}{6}$$

$$2/6 = 1/3$$

$$\frac{7}{10} - \frac{3}{8}$$

$$13/40$$

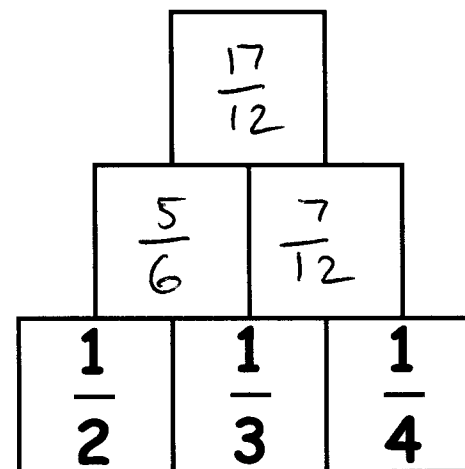
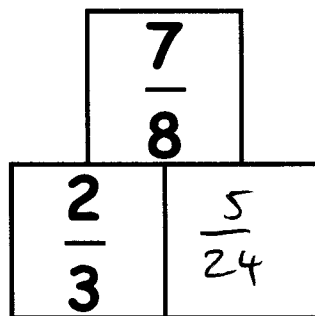
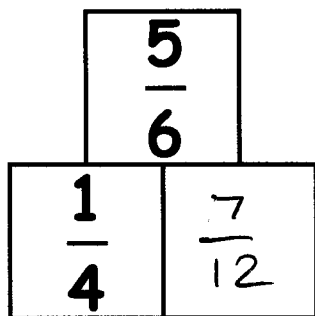
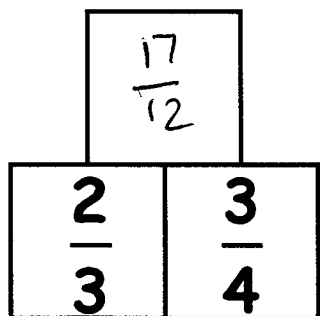
$$\frac{5}{8} - \frac{1}{6}$$

$$11/24$$

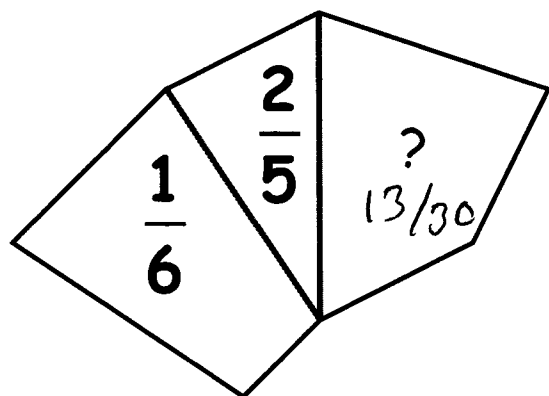
$$\frac{6}{7} - \frac{1}{2}$$

$$5/14$$

Number walls: Add the two numbers below to make the number above

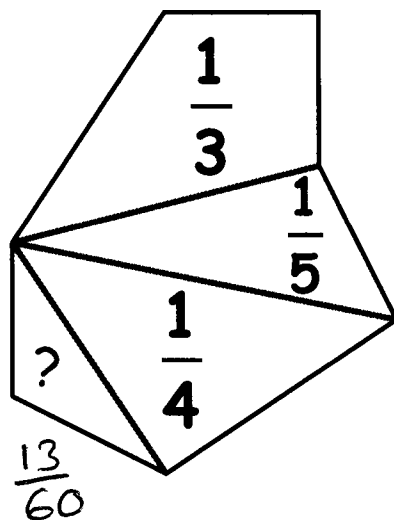


The diagram represents 1 whole. Find the missing fraction.



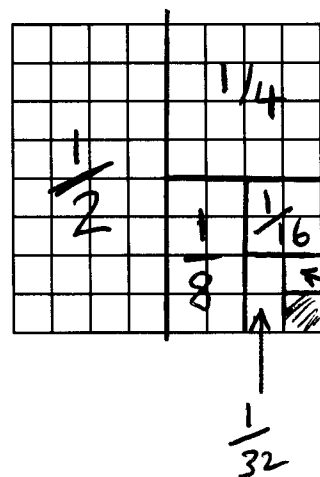
$$\frac{1}{6} + \frac{2}{5} = \frac{17}{30}$$

$$1 - \frac{17}{30} = \frac{13}{30}$$



Work out the answer to this addition

$$\frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \frac{1}{16} + \frac{1}{32} + \frac{1}{64} = \frac{63}{64}$$



On this grid shade the following fractions without any of them overlapping

- $\frac{1}{2}$
- $\frac{1}{4}$
- $\frac{1}{8}$
- $\frac{1}{16}$
- $\frac{1}{32}$
- $\frac{1}{64}$

8

Mixed fractions multiplication

$$1 \quad \frac{9}{10} \times \frac{2}{3} = \frac{18}{30} = \frac{3}{5}$$

$$4 \quad \frac{4}{7} \times \frac{1}{2} = \frac{4}{14} = \frac{2}{7}$$

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

$$2 \quad \frac{4}{5} \times \frac{3}{4} = \frac{12}{20} = \frac{3}{5}$$

$$5 \quad \frac{3}{8} \times \frac{2}{5} = \frac{6}{40} = \frac{3}{20}$$

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

$$3 \quad \frac{5}{6} \times \frac{2}{3} = \frac{10}{18} = \frac{5}{9}$$

$$6 \quad 7 \times \frac{2}{5} = \frac{14}{5}$$

$$1 \frac{3}{7} \times 4$$

$$\textcircled{7} \quad 2 \frac{2}{3} \times \frac{3}{4}$$

$$\frac{8}{3} \times \frac{3}{4} = \frac{24}{12} = 2$$

$$\textcircled{8} \quad 3 \frac{1}{4} \times 2 \frac{2}{5}$$

$$= \frac{13}{4} \times \frac{12}{5}$$

$$= \frac{156}{20} = \frac{39}{5} = 7 \frac{4}{5}$$

$$\textcircled{9} \quad 1 \frac{3}{7} \times 4$$

$$\frac{10}{7} \times 4$$

$$= \frac{40}{7}$$

$$= 5 \frac{5}{7}$$

⑨

Fraction Division

1 $\frac{3}{4} \div \frac{1}{3}$

2 $\frac{3}{5} \div \frac{1}{2}$

3 $\frac{7}{10} \div \frac{1}{6}$

4 $\frac{1}{5} \div \frac{3}{5}$

5 $1\frac{1}{6} \div \frac{1}{3}$

6 $\frac{3}{4} \div 2\frac{1}{2}$

7 $3\frac{1}{3} \div 2\frac{1}{4}$

8 $5\frac{2}{5} \div \frac{1}{10}$

① $\frac{3}{4} \times \frac{3}{1} = \frac{9}{4} = 2\frac{1}{4}$

② $\frac{3}{5} \times \frac{2}{1} = \frac{6}{5} = 1\frac{1}{5}$

③ $\frac{7}{10} \times \frac{6}{1} = \frac{42}{10} = 4\frac{1}{5}$

④ $\frac{1}{5} \times \frac{5}{3} = \frac{5}{15} = \frac{1}{3}$

⑤ $\frac{7}{6} \times \frac{3}{1} = \frac{21}{6} = 3\frac{1}{2}$

⑥ $\frac{3}{4} \times \frac{2}{5} = \frac{6}{20} = \frac{3}{10}$

⑦ $\frac{10}{3} \times \frac{4}{9} = \frac{40}{27} = 1\frac{13}{27}$

⑧ $\frac{27}{5} \times \frac{10}{1} = \frac{270}{5} = 54$

⑩

Fractions

Top Heavy and Mixed Number

$$3\frac{3}{4} = \frac{15}{4} \quad \frac{10}{3} = 3\frac{1}{3}$$

Addition and Subtraction

$$\frac{2}{5} + \frac{1}{5} = \frac{3}{5} \quad \frac{2}{5} - \frac{1}{5} = \frac{1}{5}$$

$$\frac{2}{3} + \frac{1}{4} \quad \frac{2}{3} - \frac{1}{4}$$
$$\frac{8}{12} + \frac{3}{12} = \frac{11}{12} \quad \frac{8}{12} - \frac{3}{12} = \frac{5}{12}$$

$$3\frac{2}{3} + 1\frac{5}{6} \quad 3\frac{2}{3} - 1\frac{5}{6}$$

$$\frac{11}{3} + \frac{11}{6} \quad \frac{11}{6} = 1\frac{5}{6}$$

$$\frac{22}{6} + \frac{11}{6} = \frac{33}{6}$$

$$= 5\frac{3}{6} = 5\frac{1}{2}$$

Multiplication

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

$$\frac{6}{12} = \frac{1}{2}$$

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

$$\frac{15}{4} = 3\frac{3}{4}$$

$$3\frac{2}{3} \times 1\frac{5}{6}$$

$$\frac{11}{3} \times \frac{11}{6} = \frac{121}{18} = 6\frac{13}{18}$$

Division

$$\frac{4}{5} \div \frac{1}{3}$$

$$\frac{4}{5} \times \frac{3}{1} = \frac{12}{5}$$

$$\frac{4}{5} \div 3$$

$$\frac{4}{5} \times \frac{1}{3} = \frac{4}{15}$$
$$= \frac{15}{4}$$

$$3 \div \frac{4}{5}$$

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

$$3\frac{2}{3} \div 1\frac{5}{6}$$

$$\frac{11}{3} \times \frac{6}{11} = \frac{66}{33} = 2$$

Finding a fraction of a quantity

Find $\frac{2}{5}$ of 45.

$$45 \div 5 = 9$$

$$2 \times 9 = 18$$

Write these fractions in order of size. Smallest to largest

$$\frac{3}{4} \quad \frac{3}{5} \quad \frac{7}{10}$$

$$\frac{15}{20}, \frac{12}{20}, \frac{14}{20}$$

In order $\frac{3}{5}, \frac{7}{10}, \frac{3}{4}$

(11)