# Math in English 



## Skills VI

## Exercise Book

## Topics:

Comparing fractions
Simplifying fractions


Adding and subtracting fractions
Mixed numbers and impropers
Fractions of sets

Conversion in decimals

This workbook is all about fractions and suited for grade 4/5 students. The practice material covers:

- Compare fractions with different denominators that are multiples of each other
- Simplifying fractions (reduce to lowest terms)
- Adding and subtracting fractions with different denominators that are multiples of each other
- Conversion of mixed numbers in improper fractions and vice versa
- Conversion of fractions into decimals and vice versa (whole decimal numbers/ no rounding off)

This booklet is excellent for any student: for those who are struggling with fractions, and those who feel the need to practice more. You can use it in combination with our worksheets!

Math in English

Compare the following fractions by using $>,<$ or $=$.

| $\frac{2}{3} \bigcirc \frac{1}{3}$ | $\frac{3}{4} \bigcirc \frac{3}{8}$ | $\frac{1}{2} \bigcirc \frac{1}{3}$ |
| :--- | :--- | :--- |
| $\frac{2}{4} \bigcirc \frac{1}{2}$ | $\frac{3}{4} \bigcirc \frac{2}{2}$ |  |
| $\frac{2}{5} \bigcirc \frac{2}{10}$ | $\frac{1}{3} \bigcirc \frac{2}{9}$ | $\frac{2}{6} \bigcirc \frac{1}{3}$ |
| $\frac{2}{4} \bigcirc \frac{2}{5}$ | $\frac{1}{5} \bigcirc \frac{2}{10}$ | $\frac{1}{3} \bigcirc \frac{1}{9}$ |
| $\frac{3}{9} \bigcirc \frac{2}{3}$ | $\frac{6}{9} \bigcirc \frac{1}{3}$ | $\frac{2}{3}$ |
| $\frac{1}{3} \bigcirc \frac{0}{6}$ | $\frac{1}{4} \bigcirc \frac{5}{8}$ | $\frac{9}{9}$ |
| $\frac{1}{3} \bigcirc \frac{4}{6}$ | $\frac{2}{3} \bigcirc \frac{8}{9}$ | $\frac{2}{3}$ |
| $\frac{2}{4}$ | $\frac{2}{5}$ |  |

Compare the following fractions by using $>,<$ or $=$.

| $\frac{2}{3} \bigcirc \frac{2}{9}$ | $\frac{2}{4} \bigcirc \frac{2}{8}$ |  |
| :--- | :--- | :--- |
| $\frac{2}{4} \bigcirc \frac{4}{8}$ | $\frac{1}{2} \bigcirc \frac{1}{4}$ | $\frac{1}{6} \bigcirc \frac{1}{2}$ |
| $\frac{2}{8} \bigcirc \frac{1}{4}$ | $\frac{2}{3} \bigcirc \frac{5}{9}$ | $\frac{3}{6} \bigcirc \frac{1}{2}$ |
| $\frac{2}{5} \bigcirc \frac{3}{10}$ | $\frac{2}{7} \bigcirc \frac{2}{6}$ | $\frac{1}{3} \bigcirc \frac{2}{9}$ |
| $\frac{1}{4} \bigcirc \frac{1}{5}$ | $\frac{2}{5} \bigcirc \frac{4}{10}$ | $\frac{1}{6} \bigcirc \frac{2}{3}$ |
| $\frac{4}{9} \bigcirc \frac{2}{3}$ | $\frac{4}{9} \bigcirc \frac{1}{3}$ | $\frac{1}{2} \bigcirc \frac{6}{6}$ |
| $\frac{1}{9} \bigcirc \frac{0}{3}$ | $\frac{1}{8} \bigcirc \frac{5}{8}$ | $\frac{3}{6} \bigcirc \frac{2}{3}$ |
| $\frac{1}{3} \bigcirc \frac{3}{6}$ | $\frac{1}{3} \bigcirc \frac{5}{9}$ | $\frac{3}{4} \bigcirc \frac{3-}{5}$ |

Compare the following fractions by using $>,<$ or $=$.

$$
\begin{array}{lll}
\frac{2}{4} \bigcirc \frac{1}{4} & \frac{3}{5} \bigcirc \frac{3}{6} & \frac{2}{6} \bigcirc \frac{1}{2} \\
\frac{3}{6} \bigcirc \frac{1}{2} & \frac{1}{2} \bigcirc \frac{2}{8} & \frac{4}{6} \bigcirc \frac{2}{3} \\
\frac{2}{8} \bigcirc \frac{1}{4} & \frac{2}{3} \bigcirc \frac{5}{9} & \frac{3}{3} \bigcirc \frac{8}{9} \\
\frac{4}{5} \bigcirc \frac{7}{10} & \frac{3}{5} \bigcirc \frac{3}{4} & \frac{3}{5} \bigcirc \frac{6}{10} \\
\frac{1}{4} \bigcirc \frac{1}{5} & \frac{6}{8} \bigcirc \frac{2}{4} & \frac{2}{3} \\
\frac{2}{3} & \frac{2}{7} \bigcirc \frac{2}{6} & \frac{2}{4} \bigcirc \frac{5}{8} \\
\frac{1}{3} \bigcirc \frac{2}{2} & \frac{2}{3} \bigcirc \frac{9}{9} & \frac{2}{8} \bigcirc \frac{2}{7} \\
\frac{2}{3} & \frac{3}{4} \bigcirc \frac{3}{5}
\end{array}
$$

## Simplifying Fractions

Simplify the following fractions (lowest terms)

Simplify the following fractions (lowest terms)
$\frac{3}{6}=$
$\frac{4}{10}=$
$\frac{2}{6}=$
$\frac{4}{14}=$
$\frac{6}{9}=$
$\frac{4}{12}=$
$\frac{6}{10}=$
$\frac{3}{9}=$
$\frac{4}{7}=$
$\frac{4}{8}=$
$\frac{8}{12}=$
$\frac{6}{12}=$
$\frac{20}{40}=$
$\frac{2}{10}=$
$\frac{6}{15}=$
$\frac{4}{20}=$
$\frac{12}{15}=$
$\frac{6}{18}=$
$\frac{6}{14}=$
$\frac{5}{15}=$
$\frac{16}{24}=$
$\frac{8}{16}=$
$\frac{4}{22}=$
$\frac{15}{18}=$
$\frac{8}{14}=$
$\frac{20}{30}=$
$\frac{3}{21}=$
$\frac{8}{20}=$
$\frac{8}{24}=$
$\frac{3}{30}=$
$\frac{6}{20}=$
$\frac{2}{28}=$
$\frac{7}{9}=$


## Addition and subtraction of fractions

Calculate and show your answers in the lowest terms

$$
\begin{array}{ll}
\frac{1}{6}+\frac{1}{6}= & \frac{2}{3}+\frac{1}{9}= \\
\frac{2}{4}+\frac{1}{8}= & \frac{1}{5}+\frac{1}{5}= \\
\frac{1}{6}+\frac{1}{12}= & \frac{1}{6}+\frac{1}{10}= \\
\frac{1}{3}+\frac{2}{6}= & \frac{1}{2}+\frac{1}{6}= \\
\frac{1}{4}+\frac{4}{8}= & \frac{1}{4}+\frac{5}{12}= \\
\frac{3}{5}+\frac{2}{10}= & \frac{1}{2}+\frac{2}{8}= \\
\frac{3}{6}+\frac{1}{6}= & \frac{3}{8}+\frac{3}{8}= \\
\frac{2}{8}+\frac{2}{4}= & \frac{1}{4}+\frac{1}{2}= \\
\frac{2}{20}+\frac{4}{10}= & \frac{4}{8}+\frac{3}{8}= \\
\frac{3}{12}+\frac{1}{4}= & \frac{1}{8}+\frac{1}{8}= \\
\frac{1}{6}+\frac{1}{3}= \\
\hline
\end{array}
$$

## Addition and subtraction of fractions

Calculate and show your answers in the lowest terms
$\frac{5}{8}-\frac{1}{2}=$
$\frac{4}{3}-\frac{6}{6}=$
$\frac{6}{6}-\frac{1}{3}=$
$\frac{4}{6}-\frac{1}{2}=$
$\frac{3}{3}-\frac{1}{6}=$
$\frac{4}{8}-\frac{1}{4}=$
$\frac{2}{4}-\frac{2}{8}=$
$\frac{1}{2}-\frac{1}{6}=$
$\frac{1}{4}-\frac{1}{8}=$
$\frac{5}{6}-\frac{1}{6}=$
$\frac{6}{9}-\frac{1}{3}=$
$\frac{3}{6}-\frac{1}{3}=$
$\frac{3}{5}-\frac{4}{10}=$
$\frac{4}{5}-\frac{1}{10}=$
$\frac{3}{4}-\frac{1}{8}=$
$\frac{1}{3}-\frac{1}{6}=$
$\frac{9}{6}-\frac{2}{3}=$
$\frac{1}{2}-\frac{1}{8}=$
$\frac{3}{3}-\frac{2}{6}=$
$\frac{4}{3}-\frac{4}{6}=$
$\frac{5}{8}-\frac{2}{4}=$
$\frac{3}{4}-\frac{1}{2}=$
$\frac{2}{3}-\frac{1}{6}=$
$\frac{1}{2}-\frac{1}{4}=$
$\frac{4}{5}-\frac{2}{10}=$

## Addition and subtraction of fractions

Calculate and show your answers in the lowest terms

$$
\begin{array}{ll}
\frac{2}{6}+\frac{1}{6}= & \frac{1}{3}+\frac{1}{9}= \\
\frac{1}{4}+\frac{1}{8}= & \frac{2}{5}+\frac{1}{5}= \\
\frac{2}{6}+\frac{2}{12}= & \frac{1}{5}+\frac{3}{10}= \\
\frac{1}{3}+\frac{1}{6}= & \frac{2}{6}+\frac{1}{6}=
\end{array}
$$



$$
\frac{1}{4}+\frac{1}{8}=
$$

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

$$
\frac{1}{5}+\frac{4}{20}=
$$

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

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

$$
\frac{1}{2}+\frac{1}{8}=
$$

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

$$
\frac{3}{6}+\frac{2}{12}=
$$

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

$$
\frac{1}{8}+\frac{2}{4}=
$$

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

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

$$
\frac{4}{20}+\frac{4}{10}=
$$

$$
\frac{1}{6}+\frac{0}{6}=
$$

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

$$
\frac{6}{12}+\frac{1}{4}=
$$

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

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

## Mixed numbers and improper fractions

Convert these mixed numbers into improper fractions.

| $2 \frac{1}{6}=\frac{1}{6}$ | $3 \frac{1}{3}=\frac{}{3}$ | $1 \frac{1}{3}=\frac{}{3}$ | $\widehat{(0)}$ |
| :---: | :---: | :---: | :---: |
| $5 \frac{7}{8}=\frac{8}{8}$ | $4 \frac{2}{6}=\frac{}{6}$ | $2 \frac{2}{7}=\frac{7}{7}$ |  |
| $5 \frac{2}{5}=\frac{}{5}$ | $6 \frac{1}{6}=\frac{}{6}$ | $1 \frac{2}{9}=\frac{}{9}$ | $2 \frac{2}{5}=\frac{5}{5}$ |
| $2 \frac{1}{8}=\frac{8}{8}$ | $3 \frac{2}{5}=\frac{}{5}$ | $5 \frac{3}{4}=\frac{}{4}$ | $4 \frac{1}{8}=\frac{8}{8}$ |
| $1 \frac{2}{9}=\frac{}{9}$ | $2 \frac{2}{4}=\frac{}{4}$ | $3 \frac{2}{6}=\frac{}{6}$ | $5 \frac{2}{3}=\frac{}{3}$ |
| $2 \frac{1}{3}=\frac{}{3}$ | $5 \frac{2}{6}=\frac{}{6}$ | $3 \frac{1}{8}=\frac{8}{8}$ | $1 \frac{1}{9}=\frac{}{9}$ |
| $9 \frac{2}{5}=\frac{5}{5}$ | $7 \frac{2}{3}=\frac{}{3}$ | $5 \frac{1}{3}=\frac{}{3}$ | $4 \frac{2}{7}=\frac{7}{7}$ |
| $2 \frac{2}{7}=\frac{7}{7}$ | $1 \frac{2}{7}=\overline{7}$ | $1 \frac{1}{8}=\frac{8}{8}$ | $4 \frac{1}{6}=\frac{}{6}$ |
| $5 \frac{2}{4}=\frac{}{4}$ | $1 \frac{2}{4}=\frac{}{4}$ | $2 \frac{1}{2}=\frac{}{2}$ | $3 \frac{4}{7}=\frac{7}{7}$ |

## Mixed numbers and improper fractions

Convert these mixed numbers into improper fractions.
$2 \frac{1}{5}=$
$3 \frac{1}{4}=$
$1 \frac{1}{2}=$
$5 \frac{7}{7}=$
$4 \frac{2}{5}=$
$2 \frac{2}{6}=$
$5 \frac{2}{4}=$
$6 \frac{1}{5}=$
$1 \frac{3}{9}=$
$2 \frac{3}{5}=$
$2 \frac{1}{6}=$
$3 \frac{1}{5}=$
$5 \frac{3}{3}=$
$4 \frac{2}{8}=$
$1 \frac{2}{8}=$
$2 \frac{2}{5}=$
$3 \frac{2}{5}=$
$5 \frac{2}{5}=$
$2 \frac{1}{4}=$
$5 \frac{2}{3}=$
$3 \frac{2}{8}=$
$1 \frac{2}{9}=$
$9 \frac{2}{4}=$
$7 \frac{2}{3}=$
$5 \frac{1}{3}=$
$4 \frac{2}{8}=$
$2 \frac{2}{6}=$
$1 \frac{2}{7}=$
$1 \frac{1}{7}=$
$4 \frac{2}{6}=$
$5 \frac{2}{6}=$
$1 \frac{2}{3}=$
$3 \frac{1}{2}=$
$3 \frac{4}{6}=$


## Improper fractions and mixed numbers

Convert these improper fractions into mixed numbers

$$
\begin{array}{lll}
\frac{13}{6}= & \frac{10}{3}= & \frac{4}{3}= \\
\frac{47}{8}= & \frac{26}{6}= & \frac{16}{9}= \\
\frac{27}{5}= & \frac{37}{6}= & \frac{12}{5}= \\
\frac{17}{8}= & \frac{23}{6}= & \frac{33}{8}= \\
\frac{11}{9}= & \frac{17}{4}= & \frac{17}{3}= \\
\frac{10}{3}= & \frac{32}{6}= & \frac{10}{9}= \\
\frac{47}{5}= & \frac{23}{3}= & \frac{30}{7}= \\
\frac{16}{7}= & \frac{9}{7}= & \frac{9}{8}= \\
\frac{22}{4}= & \frac{6}{4}= & \frac{5}{2}=
\end{array}
$$

## Improper fractions and mixed numbers

Convert these improper fractions into mixed numbers.

Calculate these fractions of sets
$\frac{1}{2}$ of $150=$
$\frac{1}{3}$ of $60=$
$\frac{1}{3}$ of $75=$
$\frac{1}{2}$ of $100=$
$\frac{1}{3}$ of $150=$
$\frac{1}{2}$ of $90=\quad \frac{1}{2}$ of $180=$
$\frac{1}{5}$ of $150=\quad \frac{1}{3}$ of $90=$
$\frac{1}{6}$ of $120=$
$\frac{1}{4}$ of $200=$
$\frac{1}{4}$ of $160=$
$\frac{1}{2}$ of $\quad 60=$
$\frac{1}{3}$ of $180=$
$\frac{1}{7}$ of $140=$
$\frac{1}{4}$ of $200=$
$\frac{1}{6}$ of $180=$
$\frac{1}{3}$ of $120=$

$\frac{1}{2}$ of $104=$
$\frac{1}{3}$ of $123=$
$\frac{1}{2}$ of $170=$
$\frac{1}{2}$ of $130=$
$\frac{1}{4}$ of $120=$
$\frac{1}{3}$ of $99=$
$\frac{1}{2}$ of $104=$
$\frac{1}{5}$ of $100=$
$\frac{1}{7}$ of $210=$

Calculate these fractions of sets

$$
\begin{array}{lll}
\frac{1}{2} \text { of } 100= & \frac{1}{2} \text { of } 120= \\
\frac{1}{3} \text { of } 150= & \frac{1}{2} \text { of } 140= \\
\frac{1}{2} \text { of } 180= & \frac{1}{2} \text { of } 160= \\
\frac{1}{5} \text { of } 150= & \frac{1}{2} \text { of } 124= \\
\frac{1}{5} \text { of } 120= & \frac{1}{3} \text { of } 180= & \frac{1}{3} \text { of } 297= \\
\frac{1}{4} \text { of } 200= & \frac{1}{4} \text { of } 320= & \frac{1}{2} \text { of } 176= \\
\frac{1}{2} \text { of } 110= & \frac{1}{3} \text { of } 210= & \frac{1}{3} \text { of } 264= \\
\frac{1}{5} \text { of } 220= & \frac{1}{6} \text { of } 120= & \frac{1}{3} \text { of } 270= \\
\frac{1}{6} \text { of } 140= & \frac{1}{7} \text { of } 280= & \frac{1}{2} \text { of } 198= \\
\frac{1}{2} \text { of } 102= \\
\frac{1}{9} \text { of } 270= & \frac{1}{8} \text { of } 160= & \frac{1}{5} \text { of } 250= \\
\hline 180= & \frac{1}{2}= & \\
\hline
\end{array}
$$

## Fractions of a set

What fraction of each set is shaded?


What fraction of each set is not shaded?


## Conversion of Fractions into Decimals

Convert these fractions into decimals

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

$\frac{1}{10}=$
$\frac{1}{4}=$
$\frac{1}{100}=$
$\frac{2}{20}=$
$\frac{2}{100}=$
$\frac{10}{100}=$
$\frac{1}{5}=$
$\frac{50}{100}=$
$\frac{4}{10}=$
$\frac{12}{100}=$
$\frac{3}{10}=$
$\frac{3}{4}=$
$\frac{7}{10}=$
$\frac{3}{5}=$
$\frac{2}{4}=$
$\frac{37}{100}=$
$\frac{6}{10}=$
$\frac{1}{50}=$
$\frac{1}{25}=$
$\frac{1}{20}=$
$\frac{9}{10}=$
$\frac{2}{50}=$
$\frac{2}{25}=$
$\frac{10}{20}=$
$\frac{5}{25}=$
$\frac{99}{100}=$
$\frac{4}{10}=$
$\frac{65}{100}=$
$\frac{9}{25}=$
$\frac{2}{200}=$
$\frac{7}{50}=$
$\frac{13}{100}=$
$\frac{10}{10}=$

## Conversion of Fractions into Decimals

Convert these fractions into decimals

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


$\frac{11}{100}=$
$\frac{3}{6}=$
$\frac{40}{100}=$
$\frac{1}{4}=$
$\frac{4}{10}=$
$\frac{9}{18}=$
$\frac{5}{10}=$
$\frac{44}{100}=$
$\frac{3}{20}=$
$\frac{8}{10}=$
$\frac{9}{50}=$
$\frac{5}{25}=$
$\frac{15}{20}=$
$\frac{20}{25}=$
$\frac{3}{50}=$
$\frac{4}{25}=$
$\frac{1}{10}=\quad \frac{15}{100}=$
$\frac{24}{25}=$
$\frac{91}{100}=$
$\frac{15}{100}=$
$\frac{15}{15}=$

## Conversion of Decimals into Fractions

Convert these decimals into fractions (lowest terms!)


Use your skills and solve this puzzle!


Across
2. half of 50
4. seven-tenths of 50
5. threefourths of 28
8. two-fifths of 30
10. four-eights of 40
12. onethird of 96
13. onefourth of 200
16. four-fifths of 30

## Down

1. threefourths of 20
2. threeeighths of 64
3. onefifth of 125
4. onesixth of 108
5. three sevenths of 49
6. four-fifths of 25
7. three ninthsof 81
8. two-fifths of 25
9. six-twentieths of 100
10. onethird of 45
11. four-ninths of 90
12. threefifths of 20

Compare the following fractions by using $>,<$ or $=$.
$\frac{2}{3} \otimes \frac{1}{3}$
$\frac{3}{4} \otimes \frac{3}{8}$
$\frac{1}{2} \otimes \frac{1}{3}$
$\frac{1}{3} \otimes \frac{2}{9}$
$\frac{2}{5} \oslash \frac{2}{10}$
$\frac{3}{7} \& \frac{3}{6}$
$\frac{2}{4} \otimes \frac{2}{5}$
$\frac{1}{5} \rightleftharpoons \frac{2}{10}$
$\frac{6}{9} \otimes \frac{1}{3}$
$\frac{1}{3} \otimes \frac{0}{6}$
$\frac{1}{4}<\frac{5}{8}$
$\frac{1}{3}<\frac{4}{6}$
$\frac{2}{3}<\frac{8}{9}$
$\frac{2}{6} \bigodot \frac{1}{3}$
$\frac{1}{3} \otimes \frac{1}{9}$
$\frac{2}{3} \leqslant \frac{9}{9}$
$\frac{2}{6} \leqslant \frac{2}{3}$
$\frac{3}{6} \ominus \frac{2}{2}$
$\frac{2}{3} \ominus \frac{1}{3}$
$\frac{3}{6} \ominus \frac{1}{3}$
$\frac{2}{3} \ominus \frac{9}{9}$
$\frac{2}{6} \ominus \frac{2}{3}$
$\frac{2}{4} \otimes \frac{2}{5}$

Compare the following fractions by using $>,<$ or $=$.
$\frac{2}{4} \otimes \frac{1}{4}$
$\frac{3}{6} \bigodot \frac{1}{2}$
$\frac{2}{8} \bigodot \frac{1}{4}$
$\frac{4}{5} \otimes \frac{7}{10}$
$\frac{1}{4} \otimes \frac{1}{5}$
$\frac{5}{9}<\frac{2}{3}$
$\frac{2}{7} \otimes \frac{0}{6}$
$\frac{1}{3} \leqslant \frac{2}{2}$
$\frac{3}{5} \otimes \frac{3}{6}$
$\frac{1}{2} \geqslant \frac{2}{8}$
$\frac{2}{3} \otimes \frac{5}{9}$
$\frac{3}{5}<\frac{3}{4}$
$\frac{3}{5} \bigodot \frac{6}{10}$
$\frac{6}{8} \geqslant \frac{2}{4}$
$\frac{2}{4}<\frac{5}{8}$
$\frac{2}{3}<\frac{8}{9}$

$$
\begin{aligned}
& \frac{2}{6} \curvearrowright \frac{1}{2} \\
& \frac{4}{6} \ominus \frac{2}{3} \\
& \frac{3}{3} \ominus \frac{8}{9} \\
& \frac{5}{6} \odot \frac{3}{3} \\
& \frac{2}{3} \gtrless \frac{9}{9} \\
& \frac{2}{8} \gtrless \frac{2}{7} \\
& \frac{3}{4} \circledast \frac{3}{5}
\end{aligned}
$$

Simplify the following fractions (lowest terms)

| $\frac{2}{6}=\frac{1}{3}$ | $\frac{2}{10}=\frac{1}{5}$ | $\frac{4}{6}=\frac{2}{3}$ |  |
| :--- | :--- | :--- | :--- |
| $\frac{4}{8}=\frac{1}{2}$ | $\frac{3}{9}=\frac{1}{3}$ | $\frac{2}{14}=\frac{1}{7}$ | $\frac{6}{9}=\frac{2}{3}$ |
| $\frac{2}{12}=\frac{1}{6}$ | $\frac{4}{10}=\frac{2}{5}$ | $\frac{8}{9}$ |  |
| $\frac{6}{8}=\frac{3}{4}$ | $\frac{10}{12}=\frac{5}{6}$ | $\frac{3}{12}=\frac{1}{4}$ | $\frac{10}{40}=\frac{1}{4}$ |
| $\frac{6}{10}=\frac{3}{5}$ | $\frac{3}{15}=\frac{1}{5}$ | $\frac{2}{20}=\frac{1}{10}$ | $\frac{10}{15}=\frac{2}{3}$ |
| $\frac{9}{18}=\frac{1}{2}$ | $\frac{2}{14}=\frac{1}{7}$ | $\frac{5}{25}=\frac{1}{5}$ | $\frac{12}{24}=\frac{1}{2}$ |
| $\frac{2}{16}=\frac{1}{8}$ | $\frac{2}{22}=\frac{1}{11}$ | $\frac{3}{18}=\frac{1}{6}$ | $\frac{7}{14}=\frac{1}{2}$ |
| $\frac{10}{30}=\frac{1}{3}$ | $\frac{7}{21}=\frac{1}{3}$ | $\frac{8}{24}=\frac{1}{3}$ | $\frac{4}{24}=\frac{1}{6}$ |
| $\frac{2}{30}=\frac{1}{15}$ | $\frac{6}{10}=\frac{3}{5}$ | $\frac{7}{28}=\frac{1}{4}$ | $\frac{4}{7}=\frac{4}{7}$ |

$$
\frac{10}{30}=\frac{1}{3}
$$

$$
\frac{2}{30}=\frac{1}{15}
$$

Simplify the following fractions (lowest terms)

| $\frac{3}{6}=\frac{1}{2}$ | $\frac{4}{10}=\frac{2}{5}$ | $\frac{2}{6}=\frac{1}{3}$ | $\frac{6}{8}=\frac{3}{4}$ |
| :--- | :--- | :--- | :--- |
| $\frac{6}{9}=\frac{2}{3}$ | $\frac{4}{14}=\frac{2}{7}$ | $\frac{4}{7}=\frac{1}{3}$ | $\frac{6}{10}=\frac{3}{5}$ |
| $\frac{4}{8}=\frac{1}{2}$ | $\frac{8}{12}=\frac{2}{3}$ | $\frac{6}{12}=\frac{1}{2}$ | $\frac{20}{40}=\frac{1}{2}$ |
| $\frac{2}{10}=\frac{1}{5}$ | $\frac{6}{15}=\frac{2}{5}$ | $\frac{4}{20}=\frac{1}{5}$ | $\frac{12}{15}=\frac{4}{5}$ |
| $\frac{6}{18}=\frac{1}{3}$ | $\frac{6}{14}=\frac{3}{7}$ | $\frac{5}{15}=\frac{1}{5}$ | $\frac{16}{24}=\frac{2}{3}$ |
| $\frac{8}{11}=\frac{1}{2}$ | $\frac{4}{22}=\frac{2}{11}$ | $\frac{15}{18}=\frac{5}{6}$ | $\frac{8}{14}=\frac{4}{7}$ |
| $\frac{20}{30}=\frac{2}{3}$ | $\frac{3}{21}=\frac{1}{7}$ | $\frac{8}{20}=\frac{2}{5}$ | $\frac{8}{24}=\frac{1}{3}$ |
| $\frac{3}{30}=\frac{1}{10}$ | $\frac{6}{20}=\frac{3}{10}$ | $\frac{2}{28}=\frac{1}{14}$ | $\frac{7}{9}=\frac{7}{9}$ |

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## Addition and subtraction of fractions

Calculate and show your answers in the lowest terms

| $\frac{5}{8}-\frac{1}{2}=\frac{1}{8}$ | $\frac{4}{3}-\frac{6}{6}=\frac{1}{3}$ |
| :--- | :--- |
| $\frac{6}{6}-\frac{1}{3}=\frac{2}{3}$ | $\frac{4}{2}=\frac{1}{6}$ |
| $\frac{3}{3}-\frac{1}{6}=\frac{5}{6}$ | $\frac{1}{4}=\frac{1}{4}$ |
| $\frac{2}{4}-\frac{2}{8}=\frac{1}{4}$ | $\frac{1}{4}-\frac{1}{8}=\frac{1}{8}$ |
| $\frac{1}{2}-\frac{1}{6}=\frac{1}{3}$ | $\frac{5}{6}-\frac{1}{6}=\frac{2}{3}$ |
| $\frac{4}{5}-\frac{1}{10}=\frac{7}{10}$ | $\frac{6}{9}-\frac{1}{3}=\frac{1}{3}=\frac{1}{6}$ |
| $\frac{3}{5}-\frac{4}{10}=\frac{1}{5}$ | $\frac{4}{8}=\frac{3}{8}$ |
| $\frac{3}{3}-\frac{2}{6}=\frac{2}{3}$ | $\frac{4}{6}=\frac{2}{3}$ |
| $\frac{4}{6}-\frac{1}{3}=\frac{1}{3}$ | $\frac{5}{8}-\frac{2}{4}=\frac{1}{8}$ |
| $\frac{2}{3}-\frac{1}{6}=\frac{1}{2}$ | $\frac{1}{6}=\frac{1}{4}$ |
| $\frac{3}{4}-\frac{1}{2}=\frac{1}{4}$ |  |
| $\frac{4}{5}-\frac{2}{10}=\frac{3}{5}$ |  |

Calculate and show your answers in the lowest terms

| $\frac{1}{6}+\frac{1}{6}=\frac{1}{3}$ | $\frac{2}{3}+\frac{1}{9}=\frac{7}{9}$ |  |
| :--- | :--- | :--- |
| $\frac{2}{4}+\frac{1}{8}=\frac{5}{8}$ | $\frac{1}{5}+\frac{1}{5}=\frac{2}{5}$ | $\frac{1}{6}+\frac{1}{12}=\frac{1}{4}$ |
| $\frac{1}{3}+\frac{2}{6}=\frac{2}{3}$ | $\frac{1}{6}+\frac{3}{10}$ | $\frac{1}{3}=\frac{1}{3}$ |
| $\frac{1}{4}+\frac{4}{8}=\frac{3}{4}$ | $\frac{1}{2}+\frac{1}{6}=\frac{2}{3}$ | $\frac{1}{4}+\frac{5}{20}=\frac{1}{2}$ |
| $\frac{3}{5}+\frac{2}{10}=\frac{4}{5}$ | $\frac{1}{3}+\frac{1}{9}=\frac{4}{9}$ | $\frac{1}{2}+\frac{2}{8}=\frac{3}{4}$ |
| $\frac{3}{6}+\frac{1}{6}=\frac{2}{3}$ | $\frac{3}{6}+\frac{1}{12}=\frac{7}{12}$ | $\frac{3}{8}+\frac{3}{8}=\frac{3}{4}$ |
| $\frac{2}{8}+\frac{2}{4}=\frac{3}{4}$ | $\frac{1}{4}+\frac{1}{2}=\frac{3}{4}$ | $\frac{1}{8}+\frac{3}{8}=\frac{1}{2}$ |
| $\frac{2}{20}+\frac{4}{10}=\frac{1}{2}$ | $\frac{4}{6}+\frac{0}{6}=\frac{2}{3}$ | $\frac{1}{6}+\frac{1}{3}=\frac{1}{2}$ |
| $\frac{3}{12}+\frac{1}{4}=\frac{1}{2}$ | $\frac{5}{8}+\frac{1}{8}=\frac{3}{4}$ | $\frac{1}{5}+\frac{3}{10}=\frac{1}{2}$ |

## Addition and subtraction of fractions

Calculate and show your answers in the lowest terms

Convert these mixed numbers into improper fractions.

| $2 \frac{1}{6}=\frac{13}{6}$ | $3 \frac{1}{3}=\frac{10}{3}$ | $1 \frac{1}{3}=\frac{4}{3}$ | $2 \frac{2}{7}=\frac{16}{7}$ |
| :--- | :--- | :--- | :--- |
| $5 \frac{7}{8}=\frac{47}{8}$ | $4 \frac{2}{6}=\frac{26}{6}$ | $1 \frac{2}{9}=\frac{11}{9}$ | $2 \frac{2}{5}=\frac{12}{5}$ |
| $5 \frac{2}{5}=\frac{27}{5}$ | $6 \frac{1}{6}=\frac{37}{6}$ | $5 \frac{3}{4}=\frac{23}{4}$ | $4 \frac{1}{8}=\frac{33}{8}$ |
| $2 \frac{1}{8}=\frac{17}{8}$ | $3 \frac{2}{5}=\frac{17}{5}$ | $3 \frac{2}{3}=\frac{20}{6}$ |  |
| $2 \frac{1}{9}=\frac{11}{9}$ | $2 \frac{2}{4}=\frac{10}{4}$ | $5 \frac{2}{6}=\frac{32}{6}$ | $3 \frac{1}{8}=\frac{25}{8}$ |
| $9 \frac{2}{5}=\frac{47}{5}$ | $7 \frac{2}{3}=\frac{23}{3}$ | $5 \frac{1}{3}=\frac{16}{3}$ | $4 \frac{2}{7}=\frac{30}{7}$ |
| $2 \frac{2}{7}=\frac{16}{7}$ | $1 \frac{2}{7}=\frac{9}{7}$ | $1 \frac{1}{8}=\frac{9}{8}$ | $4 \frac{1}{6}=\frac{25}{6}$ |
| $5 \frac{2}{4}=\frac{22}{4}$ | $1 \frac{2}{4}=\frac{6}{4}$ | $2 \frac{1}{2}=\frac{5}{2}$ | $3 \frac{4}{7}=\frac{25}{7}$ |

Convert these mixed numbers into improper fractions.

$$
\begin{array}{lll}
2 \frac{1}{5}=\frac{11}{5} & 3 \frac{1}{4}=\frac{13}{4} & 1 \frac{1}{2}=\frac{3}{2} \\
5 \frac{7}{7}=\frac{42}{7} & 4 \frac{2}{5}=\frac{22}{5} & 2 \frac{2}{6}=\frac{14}{6} \\
5 \frac{2}{4}=\frac{22}{4} & 6 \frac{1}{5}=\frac{31}{5} & 1 \frac{3}{9}=\frac{12}{9} \\
2 \frac{1}{6}=\frac{13}{6} & 3 \frac{1}{5}=\frac{16}{5}=\frac{13}{5} \\
1 \frac{2}{8}=\frac{10}{8} & 2 \frac{2}{3}=\frac{18}{3}=\frac{12}{5} & 3 \frac{2}{8}=\frac{34}{8} \\
2 \frac{1}{4}=\frac{9}{4} & 5 \frac{2}{3}=\frac{17}{3} & 3 \frac{2}{8}=\frac{26}{8} \\
9 \frac{2}{4}=\frac{38}{4} & 7 \frac{2}{3}=\frac{23}{3} & 5 \frac{1}{3}=\frac{11}{3} \\
2 \frac{2}{6}=\frac{14}{6} & 1 \frac{2}{7}=\frac{9}{7} & 1 \frac{1}{7}=\frac{34}{8} \\
5 \frac{2}{7}=\frac{32}{6} & 1 \frac{2}{3}=\frac{5}{4} & 3 \frac{1}{2}=\frac{26}{6} \\
& 3 \frac{4}{6}=\frac{22}{6} \\
\hline \text { opyright: Math in English } &
\end{array}
$$

Improper fractions and mixed numbers

Convert these improper fractions into mixed numbers

| $\frac{13}{6}=2 \frac{1}{6}$ | $\frac{10}{3}=3 \frac{1}{3}$ | $\frac{4}{3}=1 \frac{1}{3}$ |  |
| :--- | :--- | :--- | :--- |
| $\frac{47}{8}=5 \frac{7}{8}$ | $\frac{26}{6}=4 \frac{2}{6}$ | $\frac{16}{7}=2 \frac{2}{7}$ |  |
| $\frac{27}{5}=5 \frac{2}{5}$ | $\frac{37}{6}=6 \frac{1}{6}$ | $\frac{11}{9}=1 \frac{2}{9}$ | $\frac{12}{5}=2 \frac{2}{5}$ |
| $\frac{17}{8}=2 \frac{1}{8}$ | $\frac{17}{5}=3 \frac{2}{5}$ | $\frac{23}{4}=5 \frac{3}{4}$ | $\frac{33}{8}=4 \frac{1}{8}$ |
| $\frac{11}{9}=1 \frac{2}{9}$ | $\frac{10}{4}=2 \frac{2}{4}$ | $\frac{20}{6}=3 \frac{2}{6}$ | $\frac{17}{3}=5 \frac{2}{3}$ |
| $\frac{7}{3}=2 \frac{1}{3}$ | $\frac{32}{6}=5 \frac{2}{6}$ | $\frac{25}{8}=3 \frac{1}{8}$ | $\frac{10}{9}=1 \frac{1}{9}$ |
| $\frac{47}{5}=9 \frac{2}{5}$ | $\frac{23}{3}=7 \frac{2}{3}$ | $\frac{16}{3}=5 \frac{1}{3}$ | $\frac{30}{7}=4 \frac{2}{7}$ |
| $\frac{16}{7}=2 \frac{2}{7}$ | $\frac{9}{7}=1 \frac{2}{7}$ | $\frac{9}{8}=1 \frac{1}{8}$ | $\frac{25}{6}=4 \frac{1}{6}$ |
| $\frac{22}{4}=5 \frac{2}{4}$ | $\frac{6}{4}=1 \frac{2}{4}$ | $\frac{5}{2}=2 \frac{1}{2}$ | $\frac{25}{7}=3 \frac{4}{7}$ |

Improper fractions and mixed numbers

Convert these improper fractions into mixed numbers.

$$
\begin{array}{llll}
\frac{14}{5}=2 \frac{4}{5} & \frac{13}{4}=3 \frac{1}{4} & \frac{6}{5}=1 \frac{1}{5} \\
\frac{42}{7}=5 \frac{7}{7} & \frac{22}{5}=4 \frac{2}{5} & \frac{14}{6}=2 \frac{2}{6} \\
\frac{22}{4}=5 \frac{2}{4} & \frac{31}{5}=6 \frac{1}{5} & \frac{10}{8}=1 \frac{2}{8} & \frac{14}{6}=2 \frac{2}{6} \\
\frac{15}{7}=2 \frac{1}{7} & \frac{14}{4}=3 \frac{2}{4} & \frac{28}{5}=5 \frac{3}{5} & \frac{29}{7}=4 \frac{1}{7} \\
\frac{11}{8}=1 \frac{3}{8} & \frac{14}{6}=2 \frac{2}{6} & \frac{23}{7}=3 \frac{2}{7} & \frac{12}{2}=5 \frac{2}{2} \\
\frac{5}{2}=2 \frac{1}{2} & \frac{22}{4}=5 \frac{2}{4} & \frac{19}{6}=3 \frac{1}{6} & \frac{11}{9}=1 \frac{2}{9} \\
\frac{38}{4}=9 \frac{2}{4} & \frac{16}{2}=7 \frac{2}{2} & \frac{21}{4}=5 \frac{1}{4} & \frac{18}{4}=4 \frac{2}{4} \\
\frac{10}{4}=2 \frac{2}{4} & \frac{7}{5}=1 \frac{2}{5} & \frac{8}{7}=1 \frac{1}{7} & \frac{21}{5}=4 \frac{1}{5} \\
\frac{32}{6}=5 \frac{2}{6} & \frac{5}{3}=1 \frac{2}{3} & \frac{3}{2}=1 \frac{1}{2} & \frac{22}{6}=3 \frac{4}{6}
\end{array}
$$

Calculate these fractions of sets

| $\frac{1}{2}$ of $150=75$ | $\frac{1}{3}$ of $60=20$ |
| :--- | :--- |
| $\frac{1}{3}$ of $75=25$ | $\frac{1}{4}$ of $80=20$ |
| $\frac{1}{2}$ of $100=50$ | $\frac{1}{3}$ of $150=50$ |
| $\frac{1}{2}$ of $90=45$ | $\frac{1}{2}$ of $180=90$ |
| $\frac{1}{5}$ of $150=30$ | $\frac{1}{3}$ of $90=30$ |
| $\frac{1}{6}$ of $120=20$ | $\frac{1}{3}$ of $104=52$ |
| $\frac{1}{4}$ of $123=41$ |  |
| $\frac{1}{4}$ of $160=50$ | $\frac{1}{2}$ of $170=85$ |
| $\frac{1}{2}$ of $110=55$ | $\frac{1}{2}$ of $130=65$ |
| $\frac{1}{7}$ of $140=35$ | $\frac{1}{4}$ of $120=30$ |
| $\frac{1}{3}$ of $180=60$ | $\frac{1}{3}$ of $99=33$ |
| $\frac{1}{4}$ of $90=10$ | $\frac{1}{6}$ of $180=30$ |

What fraction of each set is shaded?


| Convert these fractions into decimals |  |  |
| :--- | :--- | :--- |
| $\frac{1}{2}=0.5$ | $\frac{1}{10}=0.1$ | $\frac{1}{4}=0.25$ |
| $\frac{1}{100}=0.01$ | $\frac{2}{20}=0.1$ | $\frac{2}{100}=0.02$ |
| $\frac{10}{100}=0.1$ | $\frac{50}{100}=0.5$ | $\frac{3}{4}=0.75$ |
| $\frac{12}{100}=0.12$ | $\frac{3}{10}=0.3$ | $\frac{3}{10}=0.7$ |
| $\frac{3}{5}=0.6$ | $\frac{2}{4}=0.5$ | $\frac{6}{10}=0.37$ |
| $\frac{1}{50}=0.02$ | $\frac{1}{25}=0.04$ | $\frac{1}{20}=0.05$ |
| $\frac{2}{50}=0.04$ | $\frac{2}{25}=0.08$ | $\frac{10}{20}=0.5$ |
| $\frac{9}{10}=0.9$ |  |  |
| $\frac{9}{200}=0.99$ | $\frac{4}{10}=0.4$ | $\frac{65}{100}=0.65$ |
| $\frac{7}{50}=0.14$ | $\frac{13}{100}=0.13$ | $\frac{10}{10}=1$ |

Conversion of Decimals into Fractions

Convert these decimals into fractions (lowest terms!)


Convert these fractions into decimals

| Convert these fractions into decimals |  |  |
| :--- | :--- | :--- |
| $\frac{4}{8}=0.5$ | $\frac{6}{20}=0.3$ | $\frac{6}{8}=0.75$ |
| $\frac{51}{100}=0.51$ | $\frac{9}{20}=0.45$ | $\frac{7}{100}=0.07$ |
| $\frac{11}{100}=0.11$ | $\frac{3}{6}=0.5$ | $\frac{40}{100}=0.4$ |
| $\frac{25}{100}=0.25$ | $\frac{3}{20}=0.15$ | $\frac{1}{4}=0.25$ |
| $\frac{4}{5}=0.8$ | $\frac{2}{8}=0.25$ | $\frac{44}{18}=0.44$ |
| $\frac{9}{50}=0.18$ | $\frac{5}{25}=0.2$ | $\frac{4}{10}=0.4$ |
| $\frac{3}{10}=0.5$ |  |  |
| $\frac{3}{50}=0.06$ | $\frac{4}{25}=0.16$ | $\frac{15}{20}=0.75$ |
| $\frac{4}{100}=0.91$ | $\frac{1}{10}=0.1$ | $\frac{15}{50}=0.16$ |
| $\frac{15}{200}=0.15$ | $\frac{8}{10}=0.8$ |  |

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Use your skills and solve this puzzle!


## Across

2. half of 50
3. seven-tenths of 50
4. threefourths of 28
5. two-fifths of 30
6. four-eights of 40
7. one third of 96
8. onefourth of 200
9. four-fifths of 30

## Down

1. threefourths of 20 2. threeeighths of 64 3. onefifth of 125
2. one sixth of 108
3. threesevenths of 49
4. four-fifths of 25
5. threeninths of 8
6. two-fifths of 25
7. six-twentieths of 100
8. onethird of 45
9. four-ninths of 90
10. threefifths of 20
