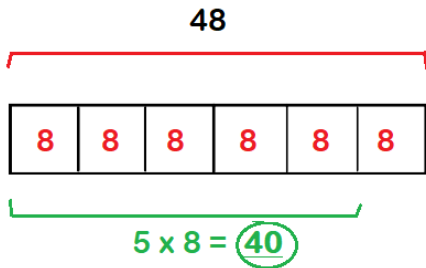


Finding Fractions using the Bar Model —Revision



Worked Example

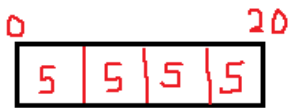
Find $\frac{5}{6}$ of 48



- Split a bar into 6 parts as you are finding sixths
- Label the WHOLE bar as 48 because this is the whole amount
- Divide 48 equally into each box ($48 \div 6 = 8$)
- You want 5 sixths so highlight 5 boxes and work out how much you have

Find

1). $\frac{1}{4}$ of 20



= 5

2). $\frac{1}{3}$ of 6



= _____

3). $\frac{1}{2}$ of 16



= _____

Find

1). $\frac{2}{3}$ of 18

= _____

2). $\frac{2}{5}$ of 40

= _____

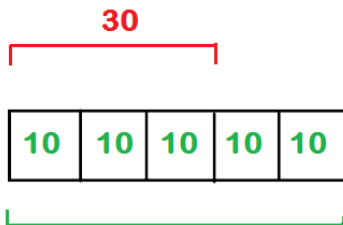
3). $\frac{3}{4}$ of 26

= _____

Worked Example

$\frac{3}{5}$ of a number is 30.

What is the whole number?



Whole number =
 $10 \times 5 = 50$

This time you highlight 3 boxes as being worth 30 because you know that $\frac{3}{5}$ is worth this

1) $\frac{2}{3}$ of a number is 10. What is the whole number?

2) $\frac{3}{4}$ of a number is 27. What is the whole number?

3) $\frac{4}{5}$ of a number is 60. What is the whole number?

For Help Videos and Answers to the questions on these topics go to...

Adding and Subtracting Fractions — Revision



Worked Example

If one denominator is not a multiple of the other you will need to change both of them to a common multiple

$$\begin{array}{r} \frac{3}{4} + \frac{1}{6} \\ \times 3 \quad \left(\right) \quad \times 2 \\ \frac{9}{12} + \frac{2}{12} = \frac{11}{12} \end{array}$$

TOP TIPS

- Show lots of working out for these questions
- You might only need to change the denominator of 1 of the fractions
- Always try and cancel down your answer or leave as a mixed number

Adding and Subtracting Fractions

1) $\frac{2}{7} + \frac{3}{14} =$

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

3) $\frac{15}{44} - \frac{3}{11} =$

4) $\frac{1}{4} + \frac{5}{12} =$

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

6) $\frac{3}{10} - \frac{1}{4} =$

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

8) $\frac{3}{8} + \frac{5}{6} =$

Adding and Subtracting Mixed Numbers

1) $1\frac{2}{5} + 1\frac{1}{6}$

3) $1\frac{6}{7} - 1\frac{1}{3}$

2) $2\frac{3}{4} + 3\frac{2}{3}$

4) $3\frac{1}{4} - 1\frac{5}{6}$

For Help Videos and Answers to the questions on these topics go to...

Multiplying and Dividing Fractions — Revision



Multiplying Fractions

Worked Example

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

TOP TIPS

- Do NOT make the bottoms the same
- Just multiply the tops and bottoms together
- Cancel down your answer

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

5) $\frac{4}{7} \times \frac{1}{12} =$

2) $\frac{3}{8} \times \frac{10}{11} =$

6) $\frac{5}{9} \times \frac{3}{20} =$

3) $\frac{8}{9} \times \frac{3}{4} =$

7) $\frac{9}{10} \times \frac{5}{6} =$

4) $\frac{2}{15} \times \frac{5}{6} =$

8) $\frac{3}{10} \times 1\frac{2}{3} =$

Dividing Fractions

Worked Example

$$\begin{aligned} & \frac{2}{7} \div \frac{3}{14} \\ & = \frac{2}{7} \times \frac{14}{3} = \frac{28}{21} = \frac{4}{3} = 1\frac{1}{3} \end{aligned}$$

TOP TIPS

- Do NOT make the bottoms the same
- Just multiply the tops and bottoms together
- Cancel down your answer

1. $\frac{2}{3} \div \frac{5}{9} =$

2. $\frac{6}{7} \div \frac{9}{10} =$

3. $\frac{4}{5} \div \frac{8}{15} =$

4. $\frac{5}{6} \div 3 =$

5. $\frac{4}{7} \div \frac{8}{11} =$

6. $\frac{3}{10} \div \frac{4}{25} =$

7. $\frac{3}{4} \div \frac{9}{20} =$

8. $16 \div \frac{3}{8} =$

For Help Videos and Answers to the questions on these topics go to...

ANSWERS - Fractions

Finding Fractions of Amounts

1). $\frac{1}{4}$ of 20 2). $\frac{1}{3}$ of 6 3). $\frac{1}{2}$ of 16

= 5 = 2 = 8

Find

1). $\frac{2}{3}$ of 18 2). $\frac{2}{5}$ of 40 3). $\frac{3}{4}$ of 26

= 12 = 16 = 19.5

Tricky Bar Model Problems

$\frac{2}{3}$ of a number is 10. What is the whole number?
15

$\frac{3}{4}$ of a number is 27. What is the whole number?
36

$\frac{4}{5}$ of a number is 60. What is the whole number?
75

Adding and Subtracting Fractions

1) $\frac{2}{7} + \frac{3}{14} = \frac{7}{14} = \frac{1}{2}$ 2) $\frac{2}{3} + \frac{1}{9} = \frac{7}{9}$ 3) $\frac{15}{44} + \frac{3}{11} = \frac{27}{44}$ 4) $\frac{1}{4} + \frac{5}{12} = \frac{8}{12} = \frac{2}{3}$

5) $\frac{2}{5} + \frac{1}{3} = \frac{11}{15}$ 6) $\frac{3}{10} + \frac{1}{3} = \frac{19}{30}$ 7) $\frac{2}{3} + \frac{2}{7} = \frac{20}{21}$ 8) $\frac{3}{8} + \frac{5}{6} = \frac{29}{24} = 1\frac{5}{24}$

Adding and Subtracting Mixed Numbers

1) $1\frac{2}{5} + 1\frac{1}{6} = 2\frac{17}{30}$ 2) $2\frac{3}{4} + 3\frac{2}{3} = 6\frac{5}{12}$ 3) $1\frac{6}{7} - 1\frac{1}{3} = \frac{11}{21}$ 4) $3\frac{1}{4} - 1\frac{5}{6} = 1\frac{5}{12}$

Multiplying Fractions

1) $\frac{1}{3} \times \frac{2}{5} = \frac{2}{15}$ 2) $\frac{3}{8} \times \frac{10}{11} = \frac{15}{44}$ 3) $\frac{8}{9} \times \frac{3}{4} = \frac{2}{9}$ 4) $\frac{2}{15} \times \frac{5}{6} = \frac{1}{9}$

5) $\frac{4}{7} \times \frac{1}{12} = \frac{1}{21}$ 6) $\frac{5}{9} \times \frac{3}{20} = \frac{1}{12}$ 7) $\frac{9}{10} \times \frac{5}{6} = \frac{3}{4}$ 8) $\frac{3}{10} \times 1\frac{2}{3} = \frac{3}{10} \times \frac{5}{3} = \frac{15}{30} = \frac{1}{2}$

Dividing Fractions

1. $\frac{2}{3} \div \frac{5}{9} = \frac{6}{5} = 1\frac{1}{5}$ 2. $\frac{6}{7} \div \frac{9}{10} = \frac{20}{21}$ 3. $\frac{4}{5} \div \frac{8}{15} = \frac{3}{2} = 1\frac{1}{2}$

4. $\frac{5}{6} \div 3 = \frac{5}{18}$ 5. $\frac{4}{7} \div \frac{8}{11} = \frac{11}{14} \cdot 1$ 6. $\frac{3}{10} \div \frac{4}{25} = \frac{9}{20}$

7. $\frac{3}{4} \div \frac{9}{20} = \frac{5}{3} = 1\frac{2}{3}$ 8. $16 \div \frac{3}{8} = \frac{128}{3} = 42\frac{2}{3}$

For Help Videos and Answers to the questions on these topics go to...