

Boost Free Lessons - Year 6 Maths

Lesson 9: Subtracting Fractions with Related Denominators

Name: _____ Grade: _____ Date: _____

Worked Example 1

Work out $\frac{3}{4} - \frac{1}{8}$.

1. 8 is a multiple of 4, so change the quarters into eighths.
2. $\frac{3}{4} = \frac{6}{8}$, by multiplying top and bottom by 2.
3. Now subtract the numerators: $6 - 1 = 5$.
4. The denominator stays as 8, giving $\frac{5}{8}$.

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

Worked Example 2

Work out $1 - \frac{2}{5}$.

1. Write the whole number as a fraction with the same denominator.
2. $1 = \frac{5}{5}$, because five fifths make one whole.
3. Now subtract: $\frac{5}{5} - \frac{2}{5}$.
4. $5 - 2 = 3$, so the answer is $\frac{3}{5}$.

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

Remember: Change the fractions so the denominators **match**, then subtract the numerators only. To take a fraction from a whole, rewrite the whole with the same denominator.



Question 1: Work out the following, simplifying where you can.

1. $\frac{1}{2} - \frac{1}{4}$

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

3. $\frac{5}{8} - \frac{1}{4}$

4. $\frac{7}{10} - \frac{1}{5}$

5. $\frac{3}{4} - \frac{3}{8}$

6. $\frac{5}{6} - \frac{1}{3}$

7. $1 - \frac{3}{8}$

8. $1 - \frac{4}{9}$



Question 2: Work out the following.

1. $\frac{5}{6} - \frac{3}{12}$

2. $\frac{7}{8} - \frac{1}{2}$

3. $1\frac{1}{2} - \frac{3}{4}$

4. $2 - \frac{1}{3}$

5. $\frac{9}{10} - \frac{2}{5}$

6. Why is it useful to write 1 as $\frac{4}{4}$ when subtracting quarters?



Question 3: Answer the following questions.

1. A bottle holds $\frac{3}{4}$ of a litre. $\frac{1}{8}$ of a litre is poured out. How much is left?

2. A tank is $\frac{5}{6}$ full. $\frac{1}{3}$ is used. What fraction remains?

3. Jack had $\frac{7}{8}$ of a cake and gave away $\frac{1}{2}$. How much is left?

4. A ribbon is 1 m long. $\frac{2}{5}$ m is cut off. How much remains?

5. A jar is $\frac{9}{10}$ full and $\frac{1}{5}$ is used. What fraction is left?





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Answers: Subtracting Fractions with Related Denominators**Question 1**

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

Question 2

1. $\frac{7}{12}$
2. $\frac{3}{8}$
3. $\frac{3}{4}$
4. $1\frac{2}{3}$
5. $\frac{5}{10} = \frac{1}{2}$
6. It gives the whole the same size pieces as the fraction you are taking away, so the numerators can be subtracted.

Question 3

1. $\frac{5}{8}$ of a litre
2. $\frac{1}{2}$ of the tank
3. $\frac{3}{8}$ of the cake
4. $\frac{3}{5}$ m
5. $\frac{7}{10}$

