

Boost Free Lessons - Year 7 Maths

Lesson 9: Decimals and Fractions

Name: _____ Grade: _____ Date: _____

Worked Example 1

Write 0.36 as a fraction in its simplest form.

1. Count the decimal places. There are 2, so the denominator is 100.
2. $0.36 = \frac{36}{100}$.
3. Simplify by dividing top and bottom by their highest common factor, 4.
4. $36 \div 4 = 9$ and $100 \div 4 = 25$.

$$0.36 = \frac{9}{25}$$

Worked Example 2

Write $\frac{3}{8}$ as a decimal.

$$\begin{array}{r} 0.375 \\ 8 \overline{) 3.30600} \end{array}$$

1. A fraction is a division, so $\frac{3}{8}$ means $3 \div 8$.
2. Set it out as a short division, writing 3 as 3.000 so there is room to keep going.
3. 8 into 3 does not go, so write 0 above and carry the 3 across to make 30.
4. 8 into 30 goes 3 times with 6 left over, so write 3 above and carry the 6 to make 60.
5. 8 into 60 goes 7 times with 4 left over, so write 7 above and carry the 4 to make 40.
6. 8 into 40 goes 5 times exactly, so write 5 above. There is nothing left to carry, so stop.

$$\frac{3}{8} = 0.375$$

Remember: 1 decimal place → tenths, 2 places → hundredths, 3 places → thousandths. Always simplify the fraction afterwards.



Question 1: Write each decimal as a fraction in its simplest form.

1. 0.5

2. 0.25

3. 0.8

4. 0.6

5. 0.75

6. 0.04

7. 0.35

8. 0.125

9. 0.45

10. 1.2



Question 2: Write each fraction as a decimal.

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

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

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

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

5. $\frac{1}{8}$

6. $\frac{5}{8}$

7. $\frac{9}{20}$

8. $\frac{2}{25}$



Question 3: Answer the following questions.

1. Write these in order from smallest to largest: 0.7 , $\frac{3}{5}$, 0.65 , $\frac{2}{3}$.
2. A shirt costs 0.4 of the price of a jacket. Write 0.4 as a fraction in its simplest form.
3. Which is larger, $\frac{5}{8}$ or 0.6 ? Show your working.
4. Zoe scored $\frac{17}{20}$ on a test. Write her score as a decimal and as a percentage.
5. A recipe needs 0.75 kg of flour. Write this as a fraction of a kilogram in simplest form.





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Answers : Decimals and Fractions**Question 1**

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

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

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

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

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

6. $\frac{1}{25}$

7. $\frac{7}{20}$

8. $\frac{1}{8}$

9. $\frac{9}{20}$

10. $1\frac{1}{5}$

Question 2

1. 0.5

2. 0.75

3. 0.2

4. 0.7

5. 0.125

6. 0.625

7. 0.45

8. 0.08

Question 3

1. $\frac{3}{5}$ (0.6), 0.65, $\frac{2}{3}$ (0.6), 0.7

2. $\frac{2}{5}$

3. $\frac{5}{8} = 0.625$, which is larger than 0.6

4. 0.85 and 85%

5. $\frac{3}{4}$ kg

