

# Foundation GCSE: Fractions and Decimals

Name: \_\_\_\_\_

Class: \_\_\_\_\_

*Instructions: Answer all questions. Questions are ordered from easiest (1) to hardest (20). Working out should be shown where appropriate.*

1. Write  $\frac{3}{10}$  as a decimal.
2. Write 0.4 as a fraction in its simplest form.
3. Write  $\frac{3}{4}$  as a decimal.
4. Write 0.75 as a fraction in its simplest form.
5. Write  $\frac{1}{5}$  as a decimal.
6. Write 0.35 as a fraction in its simplest form.
7. Write  $\frac{3}{8}$  as a decimal.
8. Write 1.6 as a mixed number in its simplest form.
9. Order from smallest to largest:  $0.6, \frac{2}{3}, 0.58$ .
10. Write  $\frac{7}{8}$  as a decimal.
11. Write 0.125 as a fraction in its simplest form.
12. Convert 2.375 to a mixed number in its simplest form.
13. Calculate  $0.4 + \frac{3}{5}$ , giving your answer as a decimal.
14. Order from smallest to largest:  $\frac{4}{5}, 0.82, \frac{7}{8}, 0.8$ .
15. Calculate  $\frac{3}{4} \times 0.2$ , giving your answer as a fraction in its simplest form.
16. Convert  $\frac{2}{3}$  to a decimal rounded to 3 decimal places.
17. Calculate  $1.25 \div \frac{1}{2}$ , giving your answer as a decimal.
18. Which is larger:  $\frac{5}{11}$  or 0.45? Show working.
19. Write the recurring decimal  $0.\dot{3}$  as a fraction.
20. Write the recurring decimal  $0.\dot{6}\dot{3}$  as a fraction in its simplest form.

## Answers & Worked Solutions

1. 0.3  
*Tenths place.*
2.  $\frac{2}{5}$   
 $\frac{4}{10}$  simplifies to  $\frac{2}{5}$ .
3. 0.75  
*Multiply numerator and denominator by 25 to get  $\frac{75}{100}$ .*
4.  $\frac{3}{4}$   
 $\frac{75}{100}$  simplifies by dividing by 25.
5. 0.2  
*Multiply top and bottom by 2 to get  $\frac{2}{10}$ .*
6.  $\frac{7}{20}$   
 $\frac{35}{100}$  simplifies by dividing by 5.
7. 0.375  
 $3 \div 8 = 0.375$ .
8.  $1\frac{3}{5}$   
 $1\frac{6}{10}$  simplifies to  $1\frac{3}{5}$ .
9. 0.58, 0.6,  $\frac{2}{3}$   
*Decimals: 0.58, 0.60, 0.667.*
10. 0.875  
 $7 \div 8 = 0.875$ .
11.  $\frac{1}{8}$   
 $\frac{125}{1000}$  simplifies by dividing by 125.
12.  $2\frac{3}{8}$   
 $2 + \frac{375}{1000} = 2\frac{3}{8}$ .
13. 1.0  
 $0.4 + 0.6 = 1.0$ .
14. 0.8,  $\frac{4}{5}$ , 0.82,  $\frac{7}{8}$   
*Decimals: 0.80, 0.80, 0.82, 0.875.*
15.  $\frac{3}{20}$   
 $\frac{3}{4} \times \frac{1}{5} = \frac{3}{20}$ .
16. 0.667  
 $2 \div 3 = 0.6666 \dots$
17. 2.5  
 $1.25 \div 0.5 = 2.5$ .
18.  $\frac{5}{11}$  ( $\approx 0.454$ )  
 $5 \div 11 = 0.4545 \dots$ , which is greater than 0.450.
19.  $\frac{1}{3}$   
*Standard recurring decimal conversion.*
20.  $\frac{7}{11}$   
 $\text{Let } x = 0.6363 \dots \implies 100x = 63.6363 \dots \implies 99x = 63 \implies x = \frac{63}{99} = \frac{7}{11}$ .