

UNIT

2

Fractions

Revision Notes

1. There are different type of fractions.
 - (a) A **proper fraction** is a fraction in which the numerator is smaller than the denominator.
E.g. $\frac{3}{5}$ and $\frac{4}{11}$
 - (b) An **improper fraction** is a fraction in which the numerator is larger than the denominator.
E.g. $\frac{5}{2}$ and $\frac{6}{5}$
 - (c) A **mixed number** is a fraction comprising a whole number and a proper fraction.
E.g. $2\frac{1}{2}$ and $5\frac{3}{5}$
2. **Equivalent fractions** are fractions that are equal in value.
E.g. $\frac{3}{5} = \frac{6}{10}$
3. A fraction in its **simplest form** is when both its numerator and denominator have no common factor other than 1.
4. **Four operations** involving fractions
 - (a) **Addition and Subtraction**
 To add or subtract fractions, they must have the same denominator.
 - (b) **Multiplication and Division**
 - (i) Always convert mixed numbers to improper fractions.
 - (ii) For multiplication, multiply numerators together and denominators together.
 - (iii) For division, multiply the first fraction by the reciprocal of the second fraction.

Revision Exercise 2

1. What fraction of each figure is shaded?
Give your answer in its simplest form.

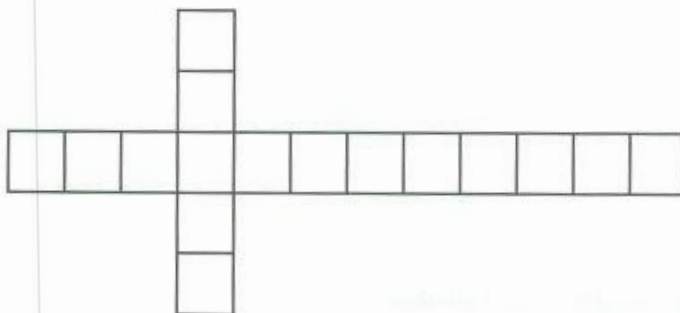
(a)



(b)



2. Shade $\frac{5}{8}$ of the figure below.



3. Arrange the following fractions in ascending order.

$$\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{1}{3}, \frac{1}{10}$$

4. Write the correct sign, ' \leq ', ' \geq ', '<', '>' or '=', in each box.

(a) $\frac{5}{7}$ $\frac{3}{7}$

(b) $\frac{6}{12}$ $\frac{3}{6}$

(c) $\frac{2}{13}$ $\frac{2}{7}$

(d) $5 \div 9$ five-ninths

(e) All proper fractions are 1.

5. Rewrite the following as improper fractions.

(a) $2\frac{3}{5}$

(b) $4\frac{1}{3}$

(c) $7\frac{4}{7}$

6. Convert the following to mixed numbers.

(a) $\frac{11}{3}$

(b) $\frac{120}{11}$

(c) $\frac{48}{47}$

7. Express each of the following fractions in its simplest form.

(a) $\frac{4}{36}$

(b) $\frac{93}{63}$

(c) $\frac{125}{220}$

8. Arrange $\frac{3}{8}$, $\frac{5}{16}$ and $\frac{5}{8}$ on a number line.

9. Evaluate the following.

(a) $\frac{2}{3} + \frac{4}{5}$

(b) $\frac{1}{2} + 1\frac{2}{3}$

(c) $6\frac{1}{2} - 5\frac{3}{4}$

(d) $7\frac{2}{9} - 1\frac{2}{3}$

(e) $\frac{14}{5} + \frac{9}{10} - \frac{3}{2}$

(f) $10\frac{4}{7} - 1\frac{3}{21}$

10. Evaluate the following.

(a) $10 \times \frac{3}{7}$

(b) $3\frac{1}{3} \times \frac{3}{8}$

(c) $5 \div 1\frac{1}{4}$

(d) $3\frac{11}{12} \div \frac{3}{4}$

11. Find the values of the following.

(a) $\frac{1}{2}$ of \$125

(b) $\frac{5}{6}$ of 1020 kg.

(c) $\frac{9}{10}$ of 560 m

(d) $\frac{2}{5}$ of 60 min

12. Find the sum of $\frac{1}{2}$, $\frac{1}{5}$ and $\frac{1}{20}$.

13. Find the difference between $11\frac{3}{10}$ and $10\frac{4}{5}$.

14. Find the product of 6 and $1\frac{1}{3}$.

15. A number, when divided by $\frac{2}{3}$, gives an answer of $1\frac{1}{5}$. Find the number.

16. Evaluate the following.

(a) $\frac{3}{10} + \frac{1}{2} \div 3$

(b) $5 + 3\frac{1}{5} \times 2\frac{1}{2}$

(c) $\left(\frac{6}{7} + \frac{3}{14}\right) + \left(\frac{5}{6} - \frac{1}{3}\right)$

17. Jonathan took $5\frac{3}{5}$ minutes to walk to the bus-stop, then spent $6\frac{1}{2}$ minutes waiting for the bus. If the bus journey to his school took $10\frac{2}{3}$ minutes, how much time did he take to reach his school?

18. Ramli ate $\frac{1}{4}$ of a pizza and divided the rest of it into 6 equal pieces. What fraction of the pizza is each of the pieces?

19. Mrs Lim bought 7 kg of longans. She gave $\frac{1}{5}$ of it to her neighbour and $\frac{1}{3}$ of the remainder to her mother-in-law. How many kilograms of longans did she have left?

20. Mrs Farah bought $12\frac{3}{4}$ m of cloth to make curtains. If she had $1\frac{1}{10}$ m of cloth left over, how much cloth did she actually use?