

YEAR 6 FRACTIONS | LEVEL 3 - CHALLENGE

Worked Answer Key

A. Understanding Fractions

1. $12 - 5 - 4 = 3$ parts. Fraction = $\frac{3}{12} = \frac{1}{4}$.

2. $1 + \frac{3}{8} = \frac{11}{8} = 1 \frac{3}{8}$.

3. $\frac{7}{10} - \frac{2}{5} = \frac{7}{10} - \frac{4}{10} = \frac{3}{10}$.

B. Equivalent Fractions

4. $\frac{9}{12} = \frac{3}{4}$; multiply numerator and denominator by 5: $\frac{15}{20}$.

5. $\frac{14}{21} = \frac{2}{3} = \frac{6}{9}$. Missing denominator = 9.

6. Yes. $\frac{18}{24} = \frac{3}{4}$ and $\frac{21}{28} = \frac{3}{4}$.

YEAR 6 FRACTIONS | LEVEL 3 - CHALLENGE

Worked Answer Key

C. Simplifying Fractions

7. GCF of 42 and 56 is 14. $\frac{42}{56} = \frac{3}{4}$.

8. Total = 30. Boys = $\frac{12}{30} = \frac{2}{5}$.

9. $\frac{24}{36} = \frac{2}{3}$ (divide both by 12).

D. Fraction of an Amount

10. $240 \times \frac{3}{8} = 90$; $90 \times \frac{2}{3} = 60$ pupils.

11. $144 \times \frac{5}{6} = 120$; $120 \times \frac{1}{4} = 30$ blue notebooks.

12. $\frac{1}{5} = 48 / 3 = 16$; whole = $16 \times 5 = 80$.

YEAR 6 FRACTIONS | LEVEL 3 - CHALLENGE

Worked Answer Key

E. Adding and Subtracting Fractions

$$13. \frac{5}{6} = \frac{20}{24}; \frac{3}{8} = \frac{9}{24}; \text{ difference} = \frac{11}{24}.$$

$$14. \frac{3}{4} + \frac{5}{6} = \frac{9}{12} + \frac{10}{12} = \frac{19}{12} = 1 \frac{7}{12} \text{ km.}$$

$$15. 2 - \frac{5}{8} - \frac{3}{4} = \frac{16}{8} - \frac{5}{8} - \frac{6}{8} = \frac{5}{8} \text{ litre.}$$

F. Multiplying a Fraction by a Whole Number

$$16. 7 \times \frac{5}{12} = \frac{35}{12} = 2 \frac{11}{12}.$$

$$17. 9 \times \frac{3}{8} = \frac{27}{8} = 3 \frac{3}{8} \text{ m.}$$

$$18. 8 \times \frac{2}{3} = \frac{16}{3} = 5 \frac{1}{3} \text{ kg.}$$

YEAR 6 FRACTIONS | LEVEL 3 - CHALLENGE

Worked Answer Key

G. Dividing a Fraction by a Whole Number

19. $\frac{5}{6} \div 4 = \frac{5}{24}$ litre.

20. $\frac{3}{4} \div 6 = \frac{3}{24} = \frac{1}{8}$ m.

21. $\frac{7}{8} \div 5 = \frac{7}{40}$ km.

H. Comparing and Ordering Fractions

22. $\frac{7}{12} = \frac{14}{24}$; $\frac{5}{8} = \frac{15}{24}$; $\frac{2}{3} = \frac{16}{24}$. Order: $\frac{7}{12}$, $\frac{5}{8}$, $\frac{2}{3}$.

23. $\frac{11}{15} = \frac{44}{60}$; $\frac{3}{4} = \frac{45}{60}$. $\frac{3}{4}$ is greater by $\frac{1}{60}$.

24. Common denominator 90: $\frac{5}{6} = \frac{75}{90}$, $\frac{7}{9} = \frac{70}{90}$, $\frac{4}{5} = \frac{72}{90}$. First runner ($\frac{5}{6}$).