



2025 TESTIFI EXAMINATION

Simplifying Fractions

Solutions and Marking Guidelines

Section I

2 marks

Questions 1–2

Question 1 (1 mark)

1

D

The fraction is $\frac{336}{504}$. To simplify, find $\text{GCD}(336, 504) = 168$. Dividing both numerator and denominator by 168: $\frac{336}{504} = \frac{336 \div 168}{504 \div 168} = \frac{2}{3}$.

Question 2 (1 mark)

1

A

The fraction is $\frac{240}{360}$. To simplify, find $\text{GCD}(240, 360) = 120$. Dividing both numerator and denominator by 120: $\frac{240}{360} = \frac{240 \div 120}{360 \div 120} = \frac{2}{3}$.

Section II

10 marks

Questions 3–6

Question 3 (1 marks)

1

Find the common factors of 18 and 24. Both are divisible by 6. $\frac{18}{24} = \frac{18 \div 6}{24 \div 6} = \frac{3}{4}$

Question 4 (2 marks)

2

Find the HCF of 84 and 126. Factors of 84: 1, 2, 3, 4, 6, 7, 12, 14, 21, 28, 42, 84 Factors of 126: 1, 2, 3, 6, 7, 9, 14, 18, 21, 42, 63, 126 $\text{HCF} = 42$ $\frac{84}{126} = \frac{84 \div 42}{126 \div 42} = \frac{2}{3}$

Question 5 (3 marks)

3

Find the HCF of 132 and 180 by prime factorisation. $132 = 2^2 \times 3 \times 11$ $180 = 2^2 \times 3^2 \times 5$ $\text{HCF} = 2^2 \times 3 = 12$ $\frac{132}{180} = \frac{132 \div 12}{180 \div 12} = \frac{11}{15}$

Question 6 (4 marks)

4

Need to simplify $\frac{168}{252}$. Find the HCF of 168 and 252. $168 = 2^3 \times 3 \times 7$ $252 = 2^2 \times 3^2 \times 7$ $\text{HCF} = 2^2 \times 3 \times 7 = 84$ $\frac{168}{252} = \frac{168 \div 84}{252 \div 84} = \frac{2}{3}$ Therefore, $\frac{2}{3}$ of the materials is concrete.