Year 5 Homework Answer

Module 13: Simplifying fractions and Lowest common denominators

1.

a)

The multiples of 4 are: 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 36 | 40 | 44 | 48 | 52 | 56 | 60 |

The multiples of 15 are: 15 | 30 | 45 | 60 |

The lowest common multiple (LCM) of 4 and 15 is: 60

b)

The multiples of 3 are: 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 |

The multiples of 10 are: 10 | 20 | 30 |

The lowest common multiple (LCM) of 3 and 10 is: 30

c)

The multiples of 2 are: 2 | 4 | 6 | 8 | 10 | 12 | 14 |

The multiples of 14 are: 14 | 28 | 42

The lowest common multiple (LCM) of 2 and 14 is: 14

2.

a) $\frac{21}{36} = \frac{21 \div 3}{36 \div 3} = \frac{7}{12}$

b) $\frac{45}{72} = \frac{45 \div 9}{72 \div 9} = \frac{5}{8}$

c) $\frac{17}{68} = \frac{17 \div 17}{68 \div 17} = \frac{1}{4}$

d) $\frac{4}{18} = \frac{4 \div 2}{18 \div 2} = \frac{2}{9}$

e) $\frac{15}{60} = \frac{15 \div 15}{60 \div 15} = \frac{1}{4}$

f) $\frac{2}{24} = \frac{2 \div 2}{24 \div 2} = \frac{1}{12}$

g) $\frac{4}{22} = \frac{4 \div 2}{22 \div 2} = \frac{2}{11}$

h) $\frac{10}{80} = \frac{10 \div 10}{80 \div 10} = \frac{1}{8}$

3.

Convert each fraction into same denominator.

a) $\frac{4}{5}, \frac{12}{10}, \frac{5}{25} = \frac{40}{50}, \frac{60}{50}, \frac{10}{50}$

smallest fraction $\frac{5}{25}$ largest fraction $\frac{12}{10}$

b) $\frac{3}{4}, \frac{14}{15}, \frac{10}{20} = \frac{45}{60}, \frac{56}{60}, \frac{30}{60}$

smallest fraction $\frac{10}{20}$ largest fraction $\frac{14}{15}$

c) $\frac{10}{100}, \frac{5}{10}, \frac{2}{25} = \frac{10}{100}, \frac{50}{100}, \frac{8}{100}$

smallest fraction $\frac{2}{25}$ largest fraction $\frac{5}{10}$

4.

Convert each fraction pair into same denominator and then compare.

a) >   b) <   c) <

d) =   e) <   f) >

g) =   h) =   i) <

5.

$\dfrac{45}{81}$	$\dfrac{5}{9}$
$\dfrac{21}{36}$	$\dfrac{7}{12}$
$\dfrac{15}{20}$	$\dfrac{3}{4}$
$\dfrac{12}{15}$	$\dfrac{4}{5}$
$\dfrac{4}{60}$	$\dfrac{1}{15}$

6.

a) 42   b) 30   c) 36

d) 30   e) 30   f) 36

g) 55   h) 24   i) 105

j) 45   k) 12   l) 24

7.

a) find HCF of 72 and 96 | $\dfrac{72}{96} = \dfrac{72 \div 24}{96 \div 24} = \dfrac{3}{4}$

b) find HCF of 105 and 220 | $\dfrac{105}{220} = \dfrac{105 \div 5}{220 \div 5} = \dfrac{21}{44}$

c) find HCF of 244 and 360 | $\dfrac{244}{360} = \dfrac{244 \div 4}{360 \div 4} = \dfrac{61}{90}$

d) find HCF of 85 and 320 | $\dfrac{85}{320} = \dfrac{85 \div 5}{320 \div 5} = \dfrac{17}{64}$

8.

Convert all fractions into same denominator

$\frac{4}{5}, \frac{5}{6}, \frac{11}{12}, \frac{5}{5}, \frac{2}{3}, \frac{1}{3}, \frac{7}{12}$
$\frac{48}{60}, \frac{50}{60}, \frac{55}{60}, \frac{60}{60}, \frac{40}{60}, \frac{20}{60}, \frac{35}{60}$

9.

Find the LCM of 27 and 54. The answer is 54

10.

60

11.

1 | 3 | 5 | 15

12.

Find the LCM of 3, 4, 5. The answer is 60 days

13.

Henry: $\frac{9}{30}$

Alex: $\frac{6}{30}$

Henry ate more desserts.

14.

Find the LCM of 8 and 14. The answer is 56 days

15.

a) $\frac{5}{12} - \frac{7}{18} = \frac{15}{36} - \frac{14}{36} = \frac{1}{36}$

b) $1 - \frac{5}{12} - \frac{7}{18} = \frac{36}{36} - \frac{15}{36} - \frac{14}{36} = \frac{7}{36}$

16.

$\frac{1}{6} + \frac{3}{20} + \frac{3}{20} + \frac{3}{20} - \frac{2}{15} = \frac{10}{60} + \frac{9}{60} + \frac{9}{60} + \frac{9}{60} - \frac{8}{60} = \frac{29}{60} \, kg$