

# KS3 Higher Week 4 answers

1, a)  $\frac{1}{4} = 20 \div 4 = 5$     b) 8    c) 36    d) 30    e) 120  
 $\frac{3}{4} = 3 \times 5 = 15$

2, a)  $\frac{1}{2}$     b)  $\frac{3}{4}$     c)  $\frac{3}{5}$     d)  $\frac{4}{5}$     e)  $\frac{4}{7}$     f)  $\frac{2}{3}$     g)  $\frac{5}{9}$

3, a)  $\frac{1}{2} = \frac{4}{8} = \frac{10}{20} = \frac{7}{14} = \frac{13}{26}$     b)  $\frac{2}{3} = \frac{6}{9} = \frac{10}{15} = \frac{20}{30} = \frac{32}{48}$

4, a)  $\frac{1}{2} \rightarrow \frac{9}{18}$     b)  $\frac{6}{8} \rightarrow \frac{3}{4}$     c)  $\frac{4}{10} \rightarrow \frac{2}{5}$     d)  $\frac{20}{24} \rightarrow \frac{5}{6}$     e)  $\frac{5}{15} \rightarrow \frac{1}{3}$

5, a)  $\frac{4}{8} \times \frac{5}{8}$     b)  $\frac{7}{10} \times \frac{6}{10}$     c)  $\frac{12}{20} \times \frac{15}{20}$     d)  $\frac{35}{56} \times \frac{32}{56}$   
 byrest    byrest    byrest    byrest

6, a)  $1\frac{1}{3}$     b)  $1\frac{2}{5}$     c)  $1\frac{3}{4}$     d)  $1\frac{2}{9}$     e)  $2\frac{3}{10}$     f)  $3\frac{4}{5}$     g)  $2\frac{2}{5}$

7, a)  $3\frac{1}{2}$     b)  $3\frac{3}{4}$     c)  $1\frac{1}{7}$     d)  $1\frac{1}{5}$     e)  $10\frac{1}{3}$     f)  $4\frac{3}{10}$     g)  $3\frac{1}{13}$

8, a)  $3\frac{3}{5}$     b)  $7\frac{7}{9}$     c)  $10\frac{10}{6} \rightarrow 1\frac{4}{6} \rightarrow 1\frac{2}{3}$     d)  $15\frac{15}{10} \rightarrow 1\frac{5}{10} \rightarrow 1\frac{1}{2}$

e)  $8\frac{8}{2} \rightarrow 4$

9, a)  $3\frac{3}{7}$     b)  $4\frac{4}{9}$     c)  $3\frac{3}{12} \rightarrow \frac{1}{4}$     d)  $2\frac{2}{20} \rightarrow \frac{1}{10}$     e)  $2\frac{2}{28} \rightarrow \frac{3}{4}$

10, a)  $\frac{1}{2} + \frac{1}{8} \rightarrow \frac{4}{8} + \frac{1}{8} = \frac{5}{8}$     b)  $\frac{3}{15} + \frac{4}{15} = \frac{7}{15}$     c)  $\frac{7}{9} - \frac{6}{9} = \frac{1}{9}$

d)  $1\frac{11}{12} - \frac{9}{12} = \frac{2}{12}$     e)  $\frac{5}{15} + \frac{3}{15} = \frac{8}{15}$     f)  $\frac{8}{20} + \frac{15}{20} = \frac{23}{20} = 1\frac{3}{20}$

g)  $\frac{5}{8} + \frac{2}{3} \rightarrow \frac{15}{24} + \frac{16}{24} = \frac{31}{24} = 1\frac{7}{24}$     h)  $\frac{5}{7} - \frac{1}{2} \rightarrow \frac{10}{14} - \frac{7}{14} = \frac{3}{14}$

i)  $8\frac{1}{99} - \frac{22}{99} = \frac{59}{99}$

11, a)  $1\frac{1}{3} + 1\frac{1}{4}$     b)  $1\frac{1}{6} + \frac{5}{2}$     c)  $12\frac{1}{5} - \frac{5}{4}$     d)  $13\frac{1}{3} - 17\frac{1}{10}$

$= \frac{4}{3} + \frac{5}{4}$

$= \frac{11}{6} + \frac{15}{6}$

$= \frac{48}{20} - \frac{25}{20}$

$= \frac{130}{30} - \frac{51}{30}$

$= \frac{16}{12} + \frac{15}{12}$

$= \frac{26}{6}$

$= \frac{23}{20}$

$= \frac{79}{30}$

$= 3\frac{1}{12} = 2\frac{7}{12}$

$= 4\frac{2}{6} = 4\frac{1}{3}$

$= 1\frac{3}{20}$

$= 2\frac{19}{30}$

12, Red =  $\frac{1}{3}$  of 24 = 8 +

24 - 14 = 10

Blue =  $\frac{1}{4}$  of 24 =  $\frac{6}{14}$

Rest are yellow = 10 balloons

13,  $\frac{2}{5}$  of 30 = 12 - eaten by Steacy  
 $\frac{1}{6}$  of 30 = 5 - given to friend  
Steacy has 13 biscuits left

$$12 + 5 = 17$$
$$30 - 17 = 13$$

14,  $\frac{8}{36} = \frac{2}{9}$  are red

15, Rained  $\frac{25}{30}$  Not rained  $\frac{5}{30} \rightarrow \frac{1}{6}$

16,  $\frac{2}{7}$  maggots free  $\therefore \frac{5}{7}$  ~~had maggot~~ maggot free

$$\frac{5}{7} \text{ of } 154$$

$$154 \div 7 = 22$$
$$22 \times 5 = 110$$

110 are edible !!

17,  $\frac{3}{5} + \frac{1}{4} = \frac{12}{20} + \frac{5}{20} = \frac{17}{20}$

whole time =  $\frac{20}{20}$

$$\frac{20}{20} - \frac{17}{20} = \frac{3}{20} \text{ are plain}$$

18, Pass  $\frac{2}{3}$  of 24 = 16

$\therefore$  Fail  $\rightarrow 24 - 16 = 8$  students

$$\frac{1}{4} \text{ of } 8 = 2$$

a) So 2 students get less than 10%

b) 22 get more than 10%

$$\frac{22}{24} = \frac{11}{12}$$