Answers

Challenge 2

1 **a)** $\frac{3}{10}$ **b)** $\frac{1}{6}$
c) $\frac{2}{8}$ or $\frac{1}{4}$ **d)** $\frac{2}{9}$

2 **a)** $\frac{1}{4}$ **b)** $\frac{3}{4}$
c) $\frac{2}{11}$

3 Any 9 marbles shaded

4 **a)** $\frac{3}{4} = \frac{6}{8}$ **b)** $\frac{1}{3} < \frac{10}{15}$
c) $\frac{5}{12} < \frac{4}{8}$

Challenge 3

1 **a)** 6 boxes shaded black, 9 boxes shaded green, 4 boxes shaded blue, 5 boxes left white
b) Black: 6, Green: 9, Blue: 4, White: 5

2 $\frac{3}{4} \rightarrow \frac{54}{72}$

$\frac{5}{8} \rightarrow \frac{80}{128}$

$\frac{1}{2} \rightarrow \frac{65}{130}$

$\frac{12}{18} \rightarrow \frac{54}{81}$

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Challenge 1

1 **a)** 3 chickens shaded black, 2 chickens shaded brown, 7 chickens left white
b) Black 3, Brown 2, White 7

2 **a)** 4 **b)** 3
c) 5

3 **a)** 3 **b)** 8
c) 20

4 **a)** 2 **b)** 10
c) 9

5 6 marbles

Challenge 2

1 **a)** 5 squares shaded yellow, 2 squares shaded purple, 8 squares shaded green, 1 square shaded red
b) Yellow: 5, Purple: 2, Green: 8, Red: 1
c) $\frac{4}{20}$ or $\frac{1}{5}$

2 **a)** 18 **b)** 9
c) 27

3 **a)** 16 **b)** 80
c) 48

4 **a)** 20 **b)** 45
c) 60

5 42 beads

Challenge 3

1 **a)** 10 squares shaded orange, 20 squares shaded blue, 25 squares shaded pink, 15 squares shaded grey, 16 squares shaded green
b) Orange: 10, Blue: 20, Pink: 25, Grey: 15, Green: 16
c) 14 squares
d) $\frac{14}{100}$ or $\frac{7}{50}$

2 **a)** $\frac{4}{5}$ **b)** 6
c) 30

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Challenge 1

1 **a)** $\frac{1}{4} + \frac{1}{4} = \frac{2}{4}$ or $\frac{1}{2}$ **b)** $\frac{5}{6} + \frac{1}{6} = \frac{6}{6}$ or 1 whole

2 **a)** $\frac{6}{7}$ **b)** $\frac{8}{12}$ (or $\frac{2}{3}$)
c) $\frac{3}{5}$

3 **a)** $\frac{4}{15}$ **b)** $\frac{1}{12}$
c) $\frac{9}{10}$

Challenge 2

1 **a)** $\frac{1}{4} + \frac{1}{8} = \frac{3}{8}$ **b)** $\frac{1}{2} + \frac{3}{8} = \frac{7}{8}$

2 **a)** $\frac{7}{10}$ **b)** $\frac{3}{4}$
c) $\frac{5}{8}$

3 **a)** $\frac{3}{10}$ **b)** $\frac{8}{12}$ (or $\frac{2}{3}$)
c) $\frac{1}{4}$

Challenge 3

1 **a)** $\frac{1}{4} + \frac{1}{6} = \frac{5}{12}$ **b)** $\frac{3}{6} - \frac{1}{4} = \frac{3}{12}$ or $\frac{1}{4}$

2 **a)** $\frac{5}{12}$ **b)** $\frac{13}{12}$
c) $\frac{19}{21}$

3 **a)** $\frac{4}{15}$ **b)** $\frac{5}{12}$
c) $\frac{9}{20}$

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Challenge 1

1 **a)** $\frac{1}{6}$ **b)** $\frac{1}{2}$
c) $\frac{1}{4}$ **d)** $\frac{1}{4}$

2 **a)** $\frac{1}{15}$ **b)** $\frac{1}{18}$
c) $\frac{1}{8}$

3 **a)** $\frac{1}{4}$ **b)** $\frac{1}{8}$
c) $\frac{1}{6}$

Challenge 2

1 **a)** $\frac{1}{18}$ **b)** $\frac{1}{4}$
c) $\frac{1}{16}$ **d)** $\frac{1}{21}$