

FRACTIONS, PERCENTAGES & PROBLEM SOLVING**Best Guess Mastery Worksheet (Target Grade 4/5)****I Do**

A shop has 120 pairs of trainers.

$\frac{1}{4}$ of the trainers are white.

30% of the trainers are black.

The rest of the trainers are grey.

Work out the number of pairs of grey trainers.

We Do

Katie has 160 books on her shelves.

$\frac{3}{8}$ of the books are fiction.

35% of the books are non-fiction.

The rest of the books are textbooks.

Work out the number of textbooks Katie has.

FRACTIONS, PERCENTAGES & PROBLEM SOLVING**Best Guess Mastery Worksheet (Target Grade 4/5)****You Do 1**

Tom has 200 model figures in a collection.

$\frac{2}{5}$ of the figures are elves.

45% of the figures are dwarves.

The rest of the figures are humans.

Work out the number of human figures Tom has.

You Do 2

Emily buys a box of 180 craft beads.

$\frac{1}{3}$ of the beads are blue.

25% of the beads are red.

The rest of the beads are green.

Work out the number of green beads Emily has.

FRACTIONS, PERCENTAGES & PROBLEM SOLVING**Best Guess Mastery Worksheet (Target Grade 4/5)****Challenge 1**

Anna has 240 potted plants in a greenhouse.

40% of the plants are flowering plants.

The remaining plants are divided between herbs and vegetables in the ratio 5 : 3.

Work out the number of vegetable plants Anna has.

Challenge 2

Mark has 300 sports cards in an album.

35% of the cards are football cards.

The remaining cards are rugby cards and cricket cards in the ratio 7 : 6.

Work out the number of rugby cards Mark has.

FRACTIONS, PERCENTAGES & PROBLEM SOLVING**Best Guess Mastery Worksheet (Target Grade 4/5)****Practice Perfect (1)**

Steve has 150 tools in a workshop.

$\frac{1}{5}$ of the tools are screwdrivers.

40% of the tools are spanners.

The rest of the tools are pliers.

Work out the number of pliers Steve has.

Practice Perfect (2)

Sophie bakes 240 biscuits for a charity event.

25% of the biscuits are shortbread.

The remaining biscuits are divided between chocolate cookies and oat biscuits in the ratio 5 : 4.

Work out the number of chocolate cookies Sophie bakes.

Answers & Worked Solutions

I Do:

White: $120 \times (1/4) = 30$

Black: 30% of 120 = $0.30 \times 120 = 36$

Grey: $120 - (30 + 36) = 120 - 66 = \mathbf{54 \text{ pairs}}$

We Do:

Fiction: $160 \times (3/8) = 60$

Non-fiction: 35% of 160 = $0.35 \times 160 = 56$

Textbooks: $160 - (60 + 56) = 160 - 116 = \mathbf{44 \text{ books}}$

You Do 1:

Elves: $200 \times (2/5) = 80$

Dwarves: 45% of 200 = $0.45 \times 200 = 90$

Humans: $200 - (80 + 90) = 200 - 170 = \mathbf{30 \text{ figures}}$

You Do 2:

Blue: $180 \times (1/3) = 60$

Red: 25% of 180 = $0.25 \times 180 = 45$

Green: $180 - (60 + 45) = 180 - 105 = \mathbf{75 \text{ beads}}$

Challenge 1:

Flowering: 40% of 240 = $0.40 \times 240 = 96$

Remaining: $240 - 96 = 144 \text{ plants}$

Ratio Herbs : Vegetables = 5 : 3 (Total parts = $5 + 3 = 8$)

1 part = $144 \div 8 = 18$

Vegetables: 3 parts = $3 \times 18 = \mathbf{54 \text{ plants}}$

Challenge 2:

Football: 35% of 300 = $0.35 \times 300 = 105$

Remaining: $300 - 105 = 195 \text{ cards}$

Ratio Rugby : Cricket = 7 : 6 (Total parts = $7 + 6 = 13$)

1 part = $195 \div 13 = 15$

Rugby: 7 parts = $7 \times 15 = \mathbf{105 \text{ cards}}$

Practice Perfect (1):

Screwdrivers: $150 \times (1/5) = 30$

Spanners: 40% of 150 = $0.40 \times 150 = 60$

Pliers: $150 - (30 + 60) = 150 - 90 = \mathbf{60 \text{ tools}}$

Practice Perfect (2):

Shortbread: 25% of 240 = $0.25 \times 240 = 60$

Remaining: $240 - 60 = 180$ biscuits

Ratio Chocolate : Oat = 5 : 4 (Total parts = $5 + 4 = 9$)

1 part = $180 \div 9 = 20$

Chocolate cookies: 5 parts = $5 \times 20 = \mathbf{100 \text{ biscuits}}$