

Unit 4: Scale Factors & Similarity

4.2A Ratios & Proportions (Review)

Ratio: a comparison of two or more quantities

Ex. On a bus there are 5 boys & 7 girls. State each ratio:

- a) Boys to girls b) Girls to boys c) Girls to total d) Boys to girls to total

Proportion: A statement of two equivalent (equal ratios)

Ex. $\frac{3}{4} = \frac{6}{8}$ or $3:4 = 6:8$

Finding unknown values in proportions – 2 methods

Method 1: inspect & use pattern

Ex. Find the missing value:

a) $\frac{4}{7} = \frac{16}{x}$

b) $\frac{x}{4} = \frac{24}{32}$

Method 2: cross-multiply

Ex. Find the missing value:

a) $\frac{5}{6} = \frac{x}{18}$

b) $2:7 = 11:x$

Using Proportions

Ex. The ratio of the width to height of an old TV screen is 4: 3. If the width is 32cm, what is the height of the screen?

Ex. On a map, 1 cm represents 800 m. If the actual distance between two spots is 2000 m, how far apart will they be on the map?