

Ratio and Proportion Mat: Working Towards Year 6

Relative Sizes

Solve simple problems involving the relative sizes of two quantities where missing values can be found by using simple integer multiplication and division facts.

A simple recipe needs 100g of flour and 60g butter.

If 300g of flour is used, how much butter is needed?

Unequal Sharing

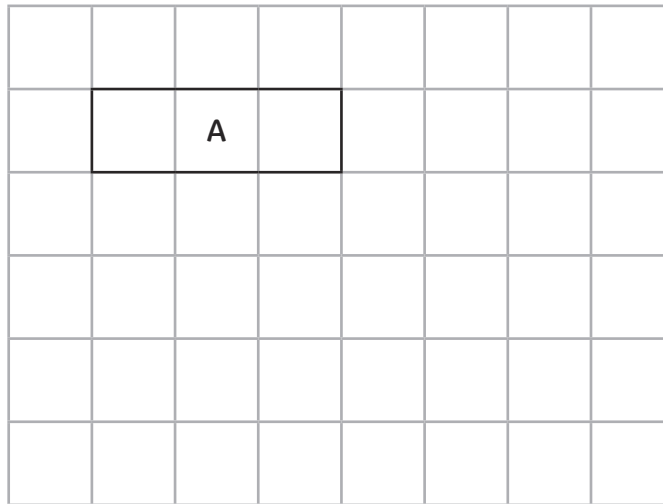
Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

A book has 120 pages divided into 4 equal chapters.

Amy has read $\frac{3}{4}$ of the book, and Janek has read 2 chapters. How much more has Amy read?

Scale Factor

Solve problems involving similar shapes where the scale factor is known.



Draw Shape B, which has a scale factor of 2 from Shape A.

Percentages

Solve problems involving the calculation of simple percentages [for example, of measures, and such as 15% of 360].

How would you find 15% of 280?

Create a pie chart to show a class of children's favourite colours:

40% blue, 30% red, 30% green.

Find 40% and 30% of 360 and measure accordingly.

Ratio and Proportion Mat: Working Towards Year 6 Answers

Relative Sizes

Solve simple problems involving the relative sizes of two quantities where missing values can be found by using simple integer multiplication and division facts.

A simple recipe needs 100g of flour and 60g butter.

If 300g of flour is used, how much butter is needed?

180g _____

Unequal Sharing

Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

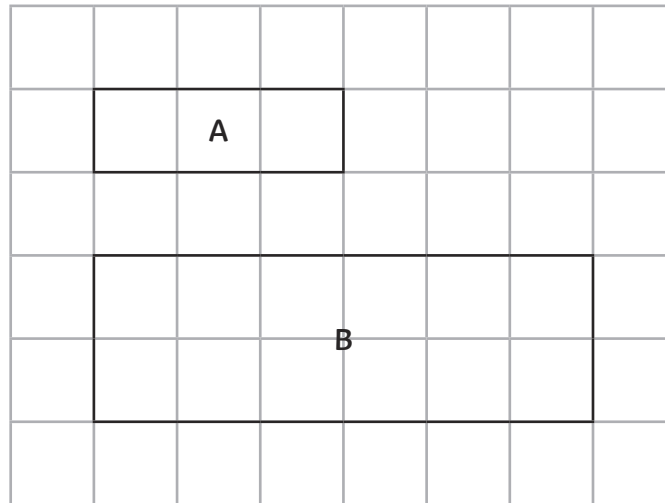
A book has 120 pages divided into 4 equal chapters.

Amy has read $\frac{3}{4}$ of the book, and Janek has read 2 chapters. How much more has Amy read?

1 chapter or 30 pages _____

Scale Factor

Solve problems involving similar shapes where the scale factor is known.



Draw Shape B, which has a scale factor of 2 from Shape A.

Percentages

Solve problems involving the calculation of simple percentages [for example, of measures, and such as 15% of 360].

How would you find 15% of 280?

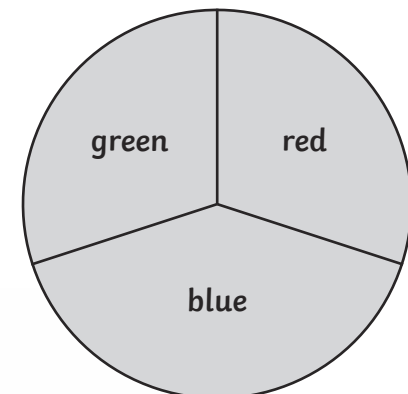
One solution: _____

find 10%, 5%: add 10% + 5% _____

28 + 14 = 42% _____

Create a pie chart to show a class of children's favourite colours:
40% blue, 30% red, 30% green.

Find 40% and 30% of 360 and measure accordingly.



Ratio and Proportion Mat: Expected Year 6

Relative Sizes

Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.

A simple recipe needs 150g of flour and 60g butter.

If 450g of flour is used, how much butter is needed?

Unequal Sharing

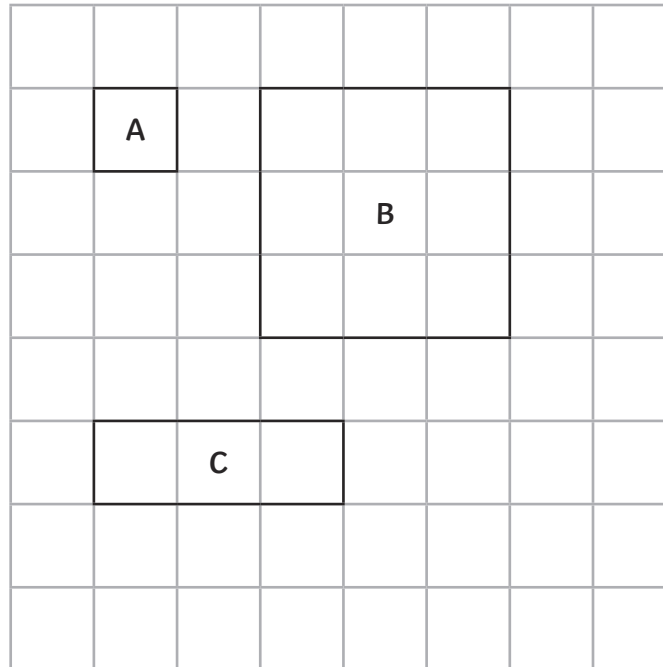
Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

A book has 120 pages divided into 5 equal chapters.

Amy has read $\frac{3}{4}$ of the book, and Janek has read 3 chapters. How much more has Amy read?

Scale Factor

Solve problems involving similar shapes where the scale factor is known or can be found.



What is the scale factor from Shape A to Shape B?

Shape D has a scale factor of 4 from Shape C. What will be the area of Shape D?

Percentages

Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison.

How would you find 17% of 280?

Create a pie chart to show a class of children's favourite colours:

40% blue, 25% red, 20% green, 15% orange.

Find 40%, 25%, 20%, 15% of 360 and measure accordingly.

Ratio and Proportion Mat: Expected Year 6 Answers

Relative Sizes

Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.

A simple recipe needs 150g of flour and 60g butter.

If 450g of flour is used, how much butter is needed?

180g _____

Unequal Sharing

Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

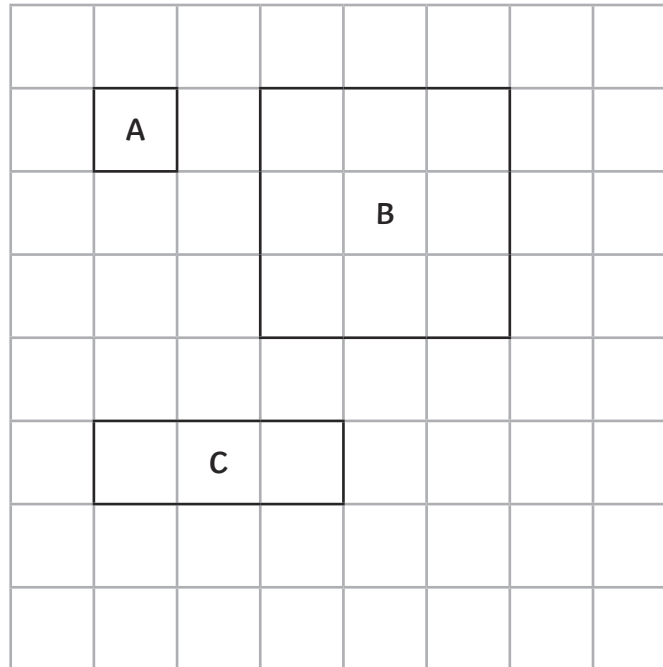
A book has 120 pages divided into 5 equal chapters.

Amy has read $\frac{3}{4}$ of the book, and Janek has read 3 chapters. How much more has Amy read?

18 pages _____

Scale Factor

Solve problems involving similar shapes where the scale factor is known or can be found.



What is the scale factor from Shape A to Shape B?

Scale factor of 3 _____

Shape D has a scale factor of 4 from Shape C. What will be the area of Shape D?

48cm²

Percentages

Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison.

How would you find 17% of 280?

One solution: _____

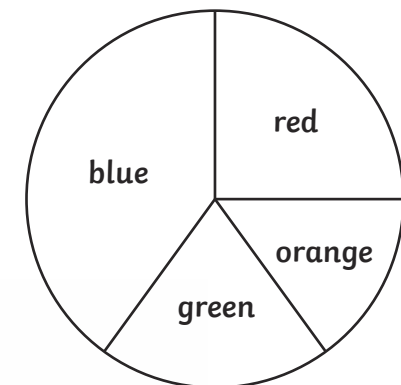
find 10%, 5% and 1%: add 10% + _____

5% + 1% + 1% _____

28 + 14 + 2.8 + 2.8 = 47.6% _____

Create a pie chart to show a class of children's favourite colours: 40% blue, 25% red, 20% green, 15% orange.

Find 40%, 25%, 20%, 15% of 360 and measure accordingly.



Ratio and Proportion Mat: Greater Depth Year 6

Relative Sizes

Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.

A simple recipe needs 150g of flour and 60g butter.

If 375g of flour is used, how much butter is needed?

Unequal Sharing

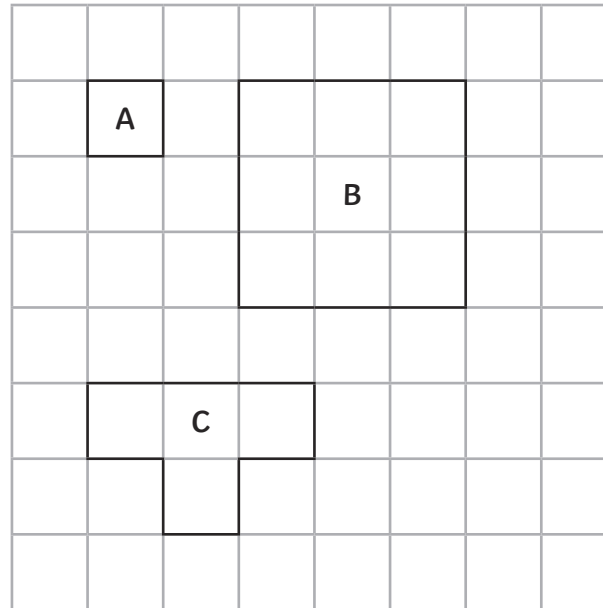
Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

A book has 120 pages divided into 8 equal chapters.

Amy has read $\frac{3}{8}$ of the book, and Janek has read 45 pages. Explain why Amy and Janek have read the same amount of the book?

Scale Factor

Solve problems involving similar shapes where the scale factor is known or can be found.



What is the scale factor from Shape A to Shape B?

Shape D has a scale factor of 4 from Shape C. Explain why the area will not be 16cm^2 .

Percentages

Solve problems involving the calculation of percentages [for example, of measures, and such as 12% of 360] and the use of percentages for comparison.

Show 2 different solutions as to how would you find 77% of 280?

Create a pie chart to show a class of children's favourite colours:

38% blue, 26% red, 19% green, 17% orange.

Find 38%, 26%, 19%, 17% of 360 and measure accordingly.

Ratio and Proportion Mat: Greater Depth Year 6 Answers

Relative Sizes

Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.

A simple recipe needs 150g of flour and 60g butter.

If 375g of flour is used, how much butter is needed?

150g _____

Unequal Sharing

Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

A book has 120 pages divided into 8 equal chapters.

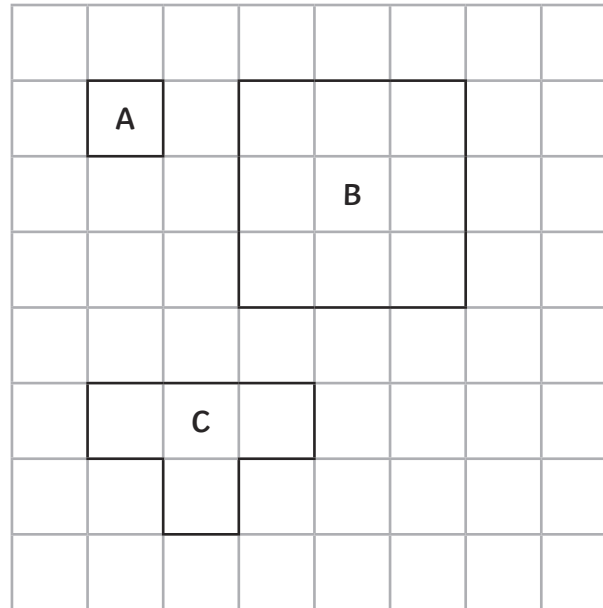
Amy has read $\frac{3}{8}$ of the book, and Janek has read 45 pages. Explain why Amy and Janek have read the same amount of the book?

$\frac{3}{8}$ of 120 = 45, so Amy and Janek _____

have both read 45 pages. _____

Scale Factor

Solve problems involving similar shapes where the scale factor is known or can be found.



What is the scale factor from Shape A to Shape B?

Scale factor of 3 _____

Shape D has a scale factor of 4 from Shape C. Explain why the area will not be 16cm^2 .

The area will be 64cm^2 _____

Percentages

Solve problems involving the calculation of percentages [for example, of measures, and such as 12% of 360] and the use of percentages for comparison.

Show 2 different solutions as to how would you find 77% of 280?

One solution: find 50%, 10%, 5% and _____

1%: add 50% + 10% + 10% + 5% _____

+ 1% + 1% _____

140 + 28 + 28 + 14 + 2.8 + 2.8 = _____

215.6% _____

Create a pie chart to show a class of children's favourite colours:

38% blue, 26% red, 19% green, 17% orange.

Find 38%, 26%, 19%, 17% of 360 and measure accordingly.

