2025 Maths Games Junior - Years 5 & 6
Resource Kit 4
Teaching Problem Solving

MATHS GAMES

Problem Solving Strategies

This resource kit focuses on the following problem solving strategies:

1. Divide a Complex Shape

Sometimes you can divide an unusual shape into two or more common shapes that are easier to work with.

2. Convert to a More Convenient Form

There are times when changing some of the conditions of a problem makes a solution clearer or more convenient.

It follows on from strategies introduced in the preparation resource kit and resource kits 1, 2 and 3:

Guess, Check and Refine
Draw a Diagram

Find a Pattern
Build a Table

Work Backwards
Make an Organised List

Solve a Simpler Related Problem
Eliminate All But One Possibility

Resource Kit 4 focuses on:

Divide a Complex Shape

Convert to a More Convenient Form

Set Yellow

Example problems for which full worked solutions are included.

Set Green

Problems that are designed to be similar to Set Yellow, but with fewer difficult elements.

Set Orange

Problems that are similar in mathematical structure to the corresponding Yellow problems.

Further questions and solution methods can be found in the APSMO resource book "Building Confidence in Maths Problem Solving", available from www.apsmo.edu.au.

How to use these problems

At the start of the lesson, present the problem and ask the students to think about it. Encourage students to try to solve it in any way they like. When the students have had enough time to consider their solutions, ask them to describe or present their methods, taking particular note of different ways of arriving at the same solution.

Each question includes at least one solution method that the majority of students should be able to follow. By participating in lessons that demonstrate achievable problem solving techniques, students may gain increased confidence in their own ability to address unfamiliar problems.

Finally, the consideration of different solution methods is fundamental to the students' development as effective and sophisticated problem solvers. Even when students have solved a problem to their own satisfaction, it is important to expose them to other methods and encourage them to judge whether or not the other methods are more efficient.

Preparation Kit

Guess, Check and Refine

This involves making a reasonable guess of the answer, and checking it against the conditions of the problem. An incorrect guess may provide more information that may lead to the answer.

Draw a Diagram

A diagram may reveal information that may not be obvious just by reading the problem.

It is also useful for keeping track of where the student is up to in a multi-step problem.

Resource Kit 1

Find a Pattern

A frequently used problem solving strategy is that of recognising and extending a pattern.

Students can often simplify a difficult problem by identifying a pattern in the problem situation.

Build a Table

A table displays information so that it is easily located and understood.

A table is an excellent way to record data so the student doesn't have to repeat their efforts.

Resource Kit 2

Work Backwards

If a problem describes a procedure and then specifies the final result, this method usually makes the problem much easier to solve.

Make an Organised List

Listing every possibility in an organised way is an important tool.

How students organise the data often reveals additional information.

Resource Kit 3

Solve a Simpler Related Problem

Many hard problems are actually simpler problems that have been extended to larger numbers.

Patterns can sometimes be identified by trying the problem with smaller numbers.

Eliminate All But One Possibility

Deciding what a quantity is not, can narrow the field to a very small number of possibilities.

These can then be tested against the conditions of the original problem.

Resource Kit 4

Convert to a More Convenient Form

There are times when changing some of the conditions of a problem makes a solution clearer or more convenient.

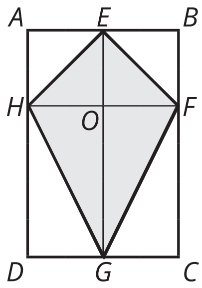
Divide a Complex Shape

Sometimes it is possible to divide an unusual shape into two or more common shapes that are easier to work with.

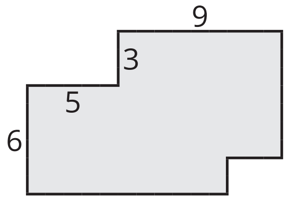
Set Yellow

4.1) What is the value of 5 × 55 – 4 × 44 + 3 × 33 – 2 × 22 + 1 × 11?

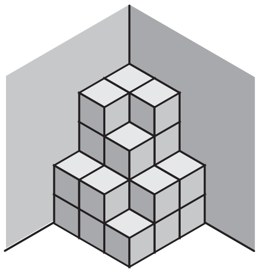
4.2) *ABCD* is a rectangle with an area of 24 square centimetres.
Points *E* and *G* are midpoints of the sides on which they are located.
The line *HF* is parallel to the line *AB*.
What is the area of the kite *EFGH*?



4.3) The figure at the right is made by placing one rectangle on top of another.
All angles in the figure are right angles.
All lengths are given in centimetres.
What is the perimeter of the figure, in centimetres?



4.4) This tower is in the corner of the room.
It was made by placing identical cubes on top of each other with no gaps.
How many cubes were used to build the tower?

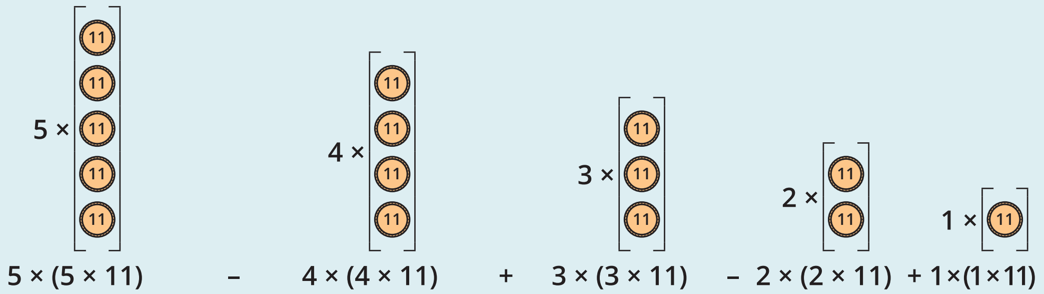


Maths Games Example Solution 4.1 - Yellow

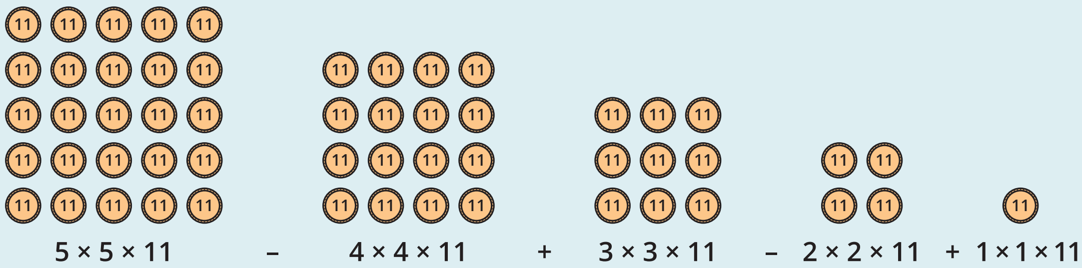
What is the value of 5 × 55 – 4 × 44 + 3 × 33 – 2 × 22 + 1 × 11?

Strategy 1: Convert to a More Convenient Form

We can represent each term as a multiple of 11.



Expanded to show how many 11s there are in total:



(5 × 5 – 4 × 4 + 3 × 3 – 2 × 2 + 1 × 1) × 11

= (25 – 16 + 9 – 4 + 1) × 11

= 15 × 11

= 165.

The expression has a value of **165**.

Strategy 2: Calculate the Result of Each Multiplication

We can solve each multiplication individually, before subtracting and adding the terms.

5 × 55 – 4 × 44 + 3 × 33 – 2 × 22 + 1 × 11

275 – 176 + 99 – 44 + 11

99 + 99 – 44 + 11

198 – 44 + 11

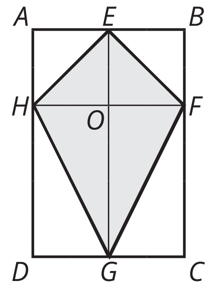
154 + 11

165

The value of the expression is **165**.

Answer 165

Maths Games Example Solution 4.2 - Yellow



ABCD is a rectangle with an area of 24 square centimetres.

Points *E* and *G* are midpoints of the sides on which they are located.

The line *HF* is parallel to the line *AB*.

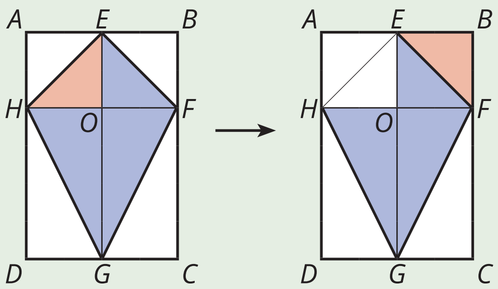
What is the area of the kite *EFGH*?

Strategy 1: Convert to a More Convenient Form

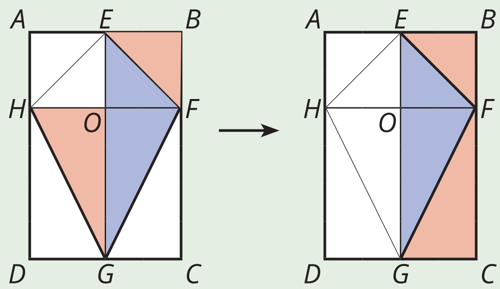
We know that the area of *ABCD* is **24** square centimetres.

By rearranging parts of *EFGH*, we can work out how much of *ABCD* it occupies.

We can begin by cutting out Δ*EOH*, and rotating this area around *E* to fill in Δ*EBF*.



We can also cut out Δ*HOG*, and flipping and rotating this area to fill in Δ*FCG*.



EBCG is half of rectangle *ABCD*, so the area of *EBCG* is **24 ÷ 2 = 12** cm^2.

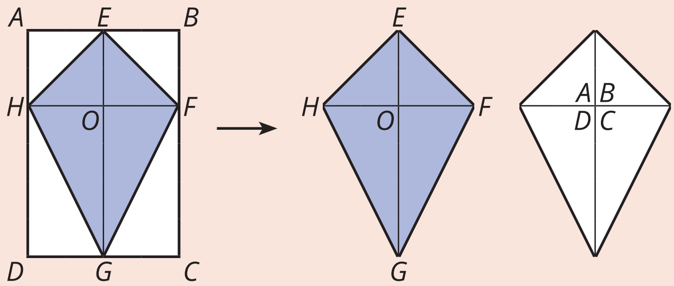
EFGH has the same area as rectangle *EBCG*, so the area of *EFGH* is **12** square centimetres.

Strategy 2: Divide a Complex Shape

We can rearrange the parts of *ABCD* that are not covered by *EFGH*, to form a second kite.

Since both kites are the same size, they must each be half of the area of *ABCD*.

The area of kite *EFGH* is **24 ÷ 2 = 12** cm^2.

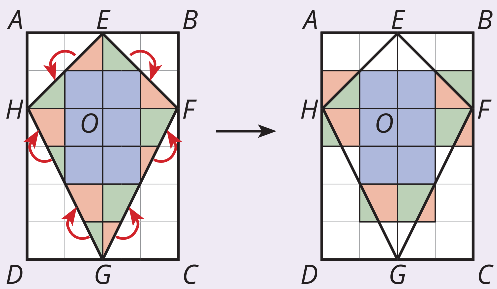


Strategy 3: Guess, Check and Refine, and Convert to a More Convenient Form

Since *ABCD* has an area of **24** square centimetres, we can guess some convenient measurements - e.g. **4** cm wide and **6** cm high.

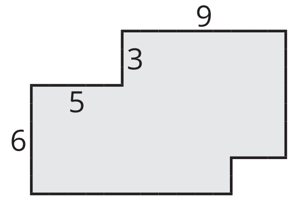
We can use these measurements to overlay a grid that comprises **24** squares.

The area of kite *EFGH* can then be rearranged to make up a total of **12** square centimetres.



Answer **12 (cm^2)**

Maths Games Example Solution 4.3 - Yellow



The figure at the right is made by placing one rectangle on top of another.

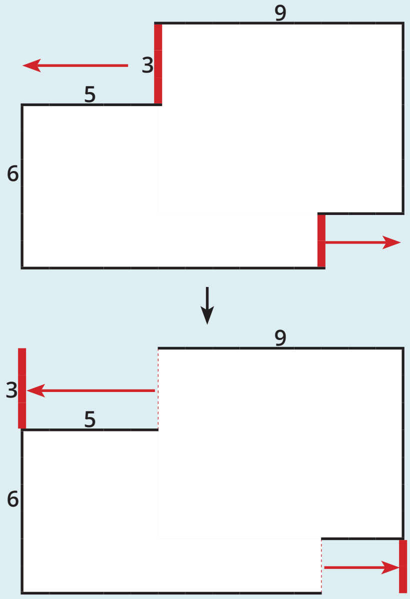
All angles in the figure are right angles.

All lengths are given in centimetres.

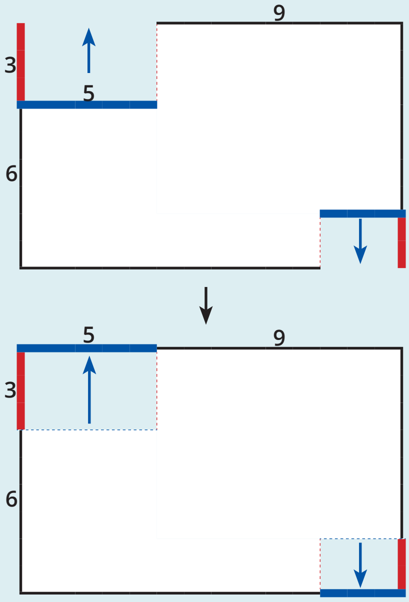
What is the perimeter of the figure, in centimetres?

Strategy 1: Convert to a More Convenient Form

We can move the vertical sides of the shape outwards so that they are in a line.



Likewise, we can move the horizontal sides of the shape outwards so that they are in a line.



The sides can be rearranged to form a rectangle with side lengths **5 + 9 = 14 cm**, and **3 + 6 = 9 cm**.

The perimeter of the rectangle is **14 + 9 + 14 + 9 = 46 cm**.

Since the rectangle was constructed using the sides from the original figure, both shapes will have the same perimeter.

Therefore the perimeter of the figure is **46 cm**.

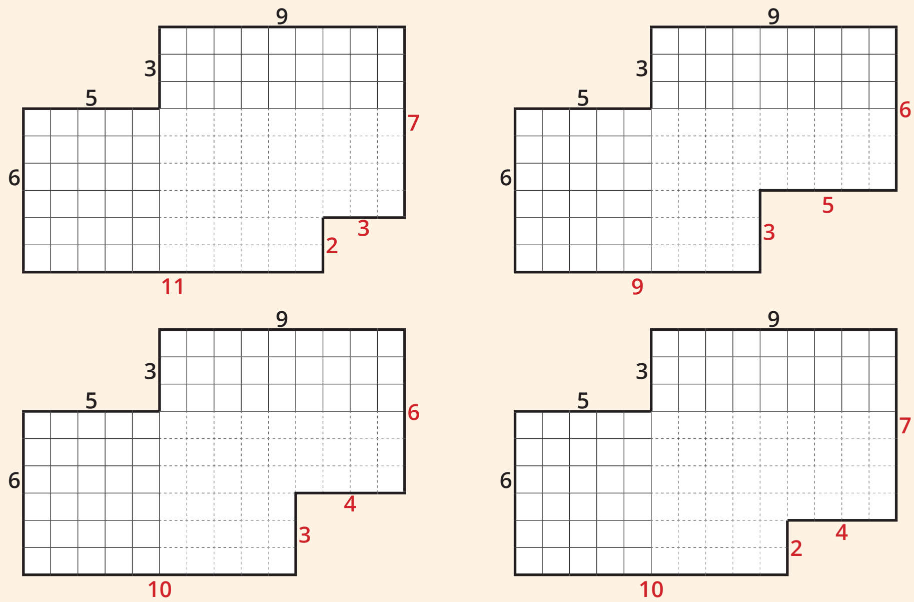
Strategy 2: Divide a Complex Shape, and Guess, Check and Refine

We can begin by sketching in a **1** cm grid pattern to divide the shape, based on the measurements that we know.

By extending the grid pattern to the other side, we can "guess" at the unknown measurements.

Four possible sets of measurements are shown at the right.

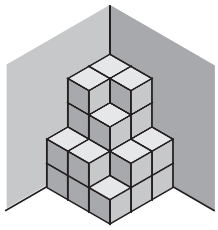
In each case, we can add all of the side lengths, and find that the perimeter is **46** centimetres.



Answer **46 (cm)**

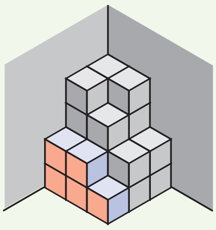
Maths Games Example Solution 4.4 - Yellow

This tower is in the corner of the room.
It was made by placing identical cubes on top of each other with no gaps.
How many cubes were used to build the tower?

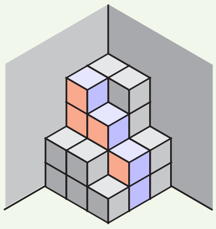


Strategy 1: Divide a Complex Shape

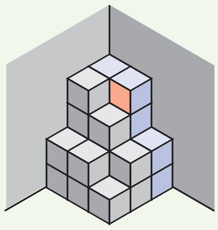
We can count the cubes in layers, going from left to right.



5 at the front.



4 more visible, plus 5 behind the ones in front: 4 + 5 = 9



1 more visible, plus 9 behind the ones in front: 1 + 9 = 10

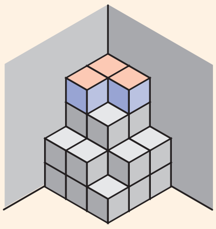
There are

5 + 9 + 10 = **24**

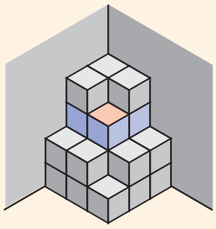
cubes in the tower.

We can get a similar result counting the layers from right to left.

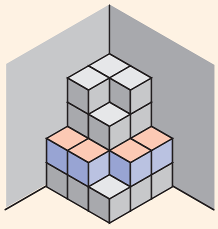
We can also split the tower into horizontal layers.



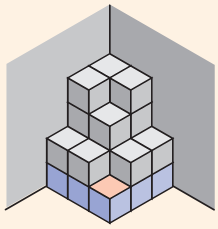
3 on top.



1 more visible, plus 3 under the ones on top: 1 + 3 = 4



4 more visible, plus 4 under the ones on top: 4 + 4 = 8

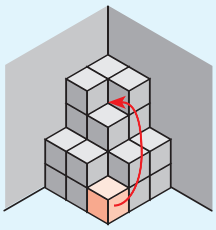


1 more visible, plus 8 under the ones on top: 1 + 8 = 9

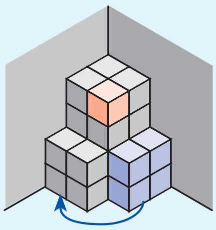
There are 3 + 4 + 8 + 9 = **24** cubes in the tower.

Strategy 2: Divide a Complex Shape (Alternative Approach)

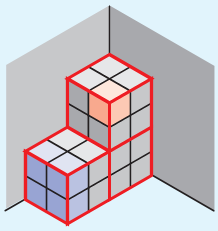
We can rearrange the cubes to make them easier to count.



First we move this cube to the gap in the top layer.



We then move these four cubes to the left side.



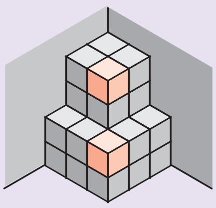
As a result, we have three big cubes.

Each big cube is made up of 2 × 2 × 2 = 8 small cubes.

There are 3 × 8 = **24** cubes in the tower.

Strategy 3: Divide a Complex Shape (Another Approach)

If we add two more cubes, there will be two large prisms.
The top prism is made up of 2 × 2 × 2 = 8 small cubes.
The lower prism is made up of 2 × 3 × 3 = 18 small cubes.
There are 8 + 18 = 26 cubes in this tower.



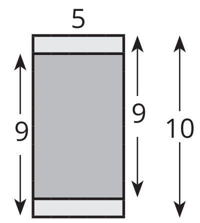
After removing the extra two cubes, there are 26 – 2 = **24** cubes that were in the original tower.

Answer **24**

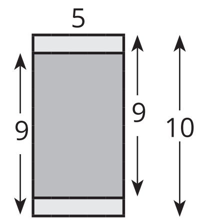
Set Green

4.1) What is the value of 5 × 50 – 4 × 40 + 3 × 30 – 2 × 20 + 1 × 10?

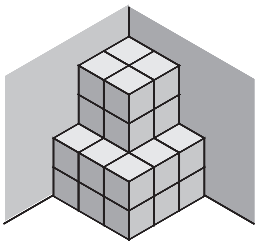
4.2) Two 5 cm × 9 cm rectangles overlap as shown to form a 5 cm × 10 cm rectangle.
What is the **area** of the overlapping rectangular region, in centimetres?



4.3) Two 5 cm × 9 cm rectangles overlap as shown to form a 5 cm × 10 cm rectangle.
What is the **perimeter** of the overlapping rectangular region, in centimetres?



4.4) This tower is in the corner of the room.
It was made by placing identical cubes on top of each other with no gaps.
How many cubes were used to build the tower?



Preparation Task 1

A) Sarah shaded the square (the cat's face) on the tangram square.

She noticed that the face was divided into four equal-sized right-angled triangles.

Sarah then shaded the parallelogram (the cat's tail) on the tangram square, and divided it into right-angled triangles as well.

How many right-angled triangles would there be in the cat's tail?

Are the right-angled triangles in the cat's tail all the same size? Explain your answer.

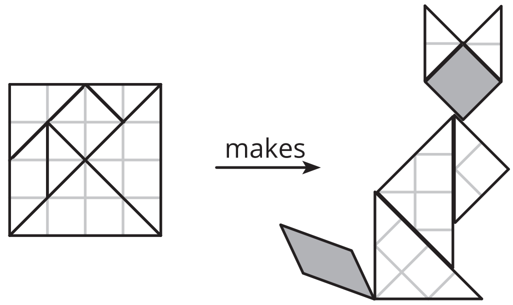
A tangram is a puzzle square.

It is cut along the black lines to make seven separate pieces.

I have used all of the pieces to make a picture of a cat.

The cat's face and tail are both shaded.

Is the area of the face larger, smaller, or the same as the area of the tail?



B) Zara said,

"I rearranged the triangles in the square so it became a parallelogram.

That way, I could compare the areas."

Draw a diagram to show how Zara might have done this.

C) Jo said,

"I know that a square is a special kind of rectangle, but is a rectangle a special kind of parallelogram?

I managed to make a rectangle using the same four triangles."

Draw a diagram to show what Jo might have created.

D) Zara said,

"I think I have made a different parallelogram with the same four triangles!"

Can you create another parallelogram?

Maths Games Example Solution - Preparation Task 1

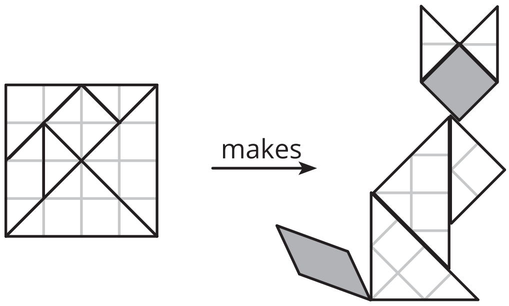
A tangram is a puzzle square.

It is cut along the black lines to make seven separate pieces.

I have used all of the pieces to make a picture of a cat.

The cat's face and tail are both shaded.

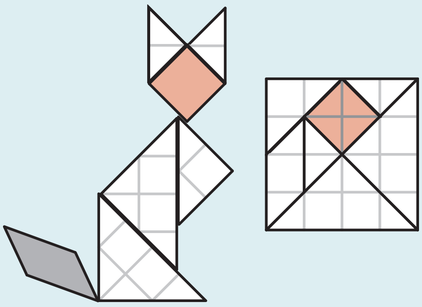
Is the area of the face larger, smaller, or the same as the area of the tail?



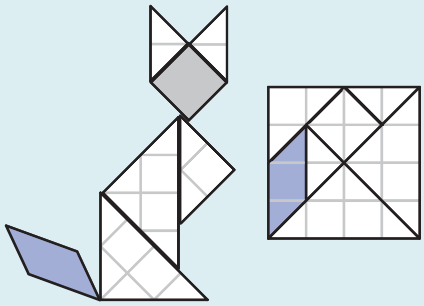
Strategy 1: Convert to a More Convenient Form, and Divide a Complex Shape

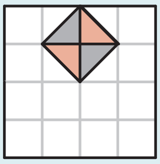
We can begin by arranging the tangram as a square.

The face fits in this area of the tangram.

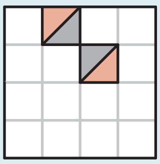


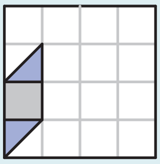
The tail fits in this area of the tangram.



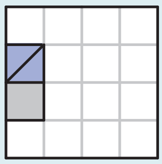


Dividing the area of the face along the grid lines, we can see that it takes up the area of two grid squares.





Dividing the area of the tail along the grid lines, we can see that it takes up the area of two grid squares.

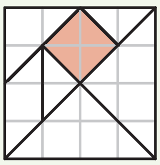


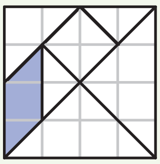
The face and the tail each have an area equal to that of 2 grid squares.

The cat's face and the cat's tail have the **same** area.

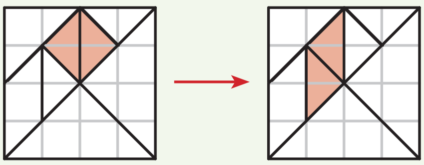
Strategy 2: Convert to a More Convenient Form (Alternative Approach)

Using the square arrangement for the tangram, there are a few different ways we might compare the area of the face to the area of the tail.

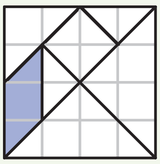




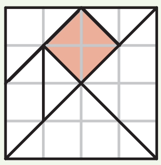
We could divide the face into two symmetrical halves, and reposition one of the halves as shown in the diagram.



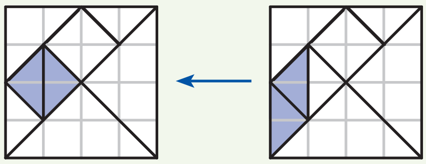
The new area occupied by the face is identical to the area occupied by the tail.



Alternatively, we could divide the tail into two identical halves, and reposition one of the halves as shown in the diagram.



The new area occupied by the tail is identical to the area occupied by the face.



The cat's face and the cat's tail have the **same** area.

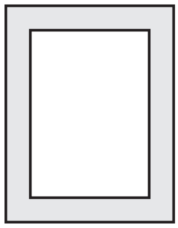
Answer **Same**

Preparation Task 2

A rectangular picture frame is 21 cm wide and 27 cm high.

The wooden part of the frame forms a 3 cm wide border around a sheet of glass, as shown in the diagram.

Find the area of the top surface of the wood frame, in cm^2.



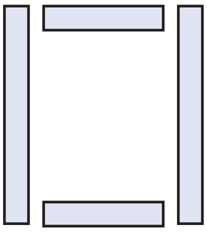
A) George, Danny and Leo divided the shape in three different ways, as shown below.

Label each rectangle with the correct dimensions, and calculate the area of each rectangle.

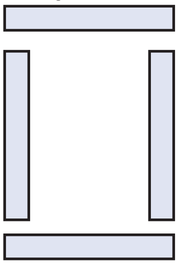
Then, find the area of the whole frame.

Do all three methods agree?

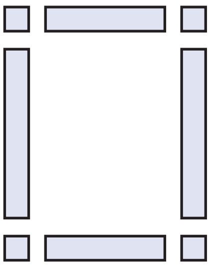
George's Method



Danny's Method



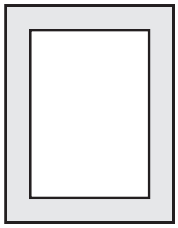
Leo's Method



B) Stuart thought it might be useful to find the area of the sheet of glass.

Show how Stuart could use this idea to find the area of the wooden part of the frame.

Maths Games Example Solution - Preparation Task 2



A rectangular picture frame is 21 cm wide and 27 cm high.

The wooden part of the frame forms a 3 cm wide border around a sheet of glass, as shown in the diagram.

Find the area of the top surface of the wood frame, in cm^2.

Strategy 1: Divide a Complex Shape

The frame is 21 cm wide, and 27 cm high. It forms a 3 cm border around the glass.

Method 1: Divide the frame horizontally.

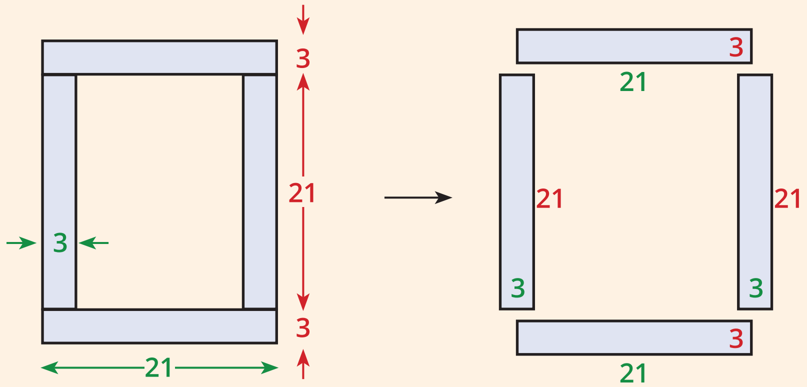
To work out the area of the frame, we can break it into rectangular sections, as shown.

The two vertical rectangles would each have a height of 27 – 3 – 3 = 21 cm.

We now have:

- Two rectangles measuring 21 cm wide × 3 cm high, and
- Two rectangles measuring 3 cm wide × 21 cm high.

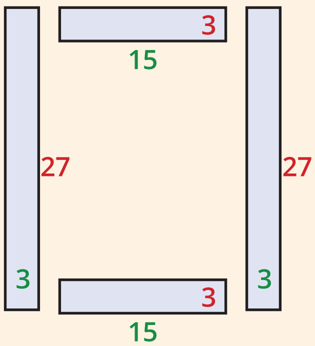
The area of the frame is
2 × (21 cm × 3 cm) + 2 × (3 cm × 21 cm)
= **252 cm^2**.



Method 2: Divide the frame vertically.

The two horizontal rectangles would each have a width of 21 – 3 – 3 = 15 cm.

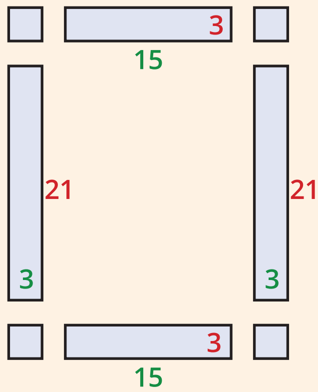
The area of the frame is
= 2 × (15 cm × 3 cm)
+ 2 × (3 cm × 27 cm)
= **252 cm^2**.



Method 3: Consider the corners separately.

We can calculate the areas of the four 3 cm × 3 cm corners separately.

The area of the frame is
= 2 × (15 cm × 3 cm)
+ 2 × (3 cm × 21 cm)
+ 4 × (3 cm × 3 cm)
= **252 cm^2**.



Strategy 2: Divide a Complex Shape (Alternative Approach)

The frame forms a 3 cm border around the glass.

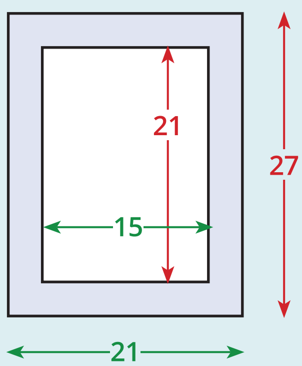
This means that the glass must measure:

- 21 – 3 – 3 = 15 cm wide, and
- 27 – 3 – 3 = 21 cm high.

The area of the glass is 15 × 21 = 315 cm^2.

The area of the frame, including the glass, is 21 × 27 = 567 cm^2.

The area of the frame, without the glass, is 567 cm^2 – 315 cm^2 = **252 cm^2**.



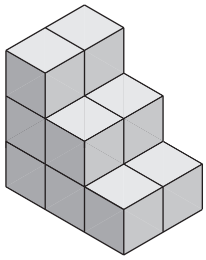
Answer 252 (cm^2)

Preparation Task 3

Sam built a staircase out of 12 identical wooden cubes.

She glued the cubes together and then painted the outside of the whole staircase, including the base.

How many cube faces did she paint?

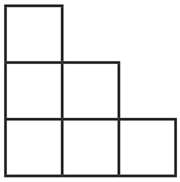


A) Omar said,

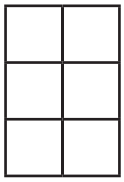
"There are six faces on a cube, so there are six different ways to look directly at different faces of a cube.

That means that there must be six different ways to look directly at different sides of this staircase."

Omar drew the left side view, and the top view, like this.



Left View



Top View

Draw the other four views of this staircase.

B) Ally said,

"I think we can just look at the staircase, and count the faces ... right?"

She then realised that there are faces that cannot be seen in the picture.

Draw a diagram to show how Ally might count the outside faces of each cube in the staircase.

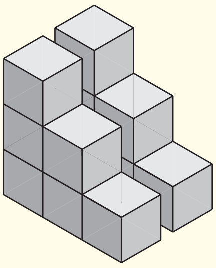
Maths Games Example Solution - Preparation Task 3

Sam built a staircase out of 12 identical wooden cubes.
She glued the cubes together and then painted the outside of the whole staircase, including the base.
How many cube faces did she paint?

Strategy 1: Divide a Complex Shape

The staircase is two blocks wide.

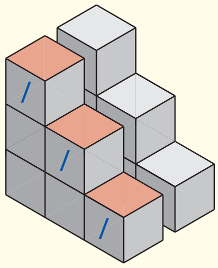
If we split it in half, we will have two sections, each one block wide, that are mirror images of each other.



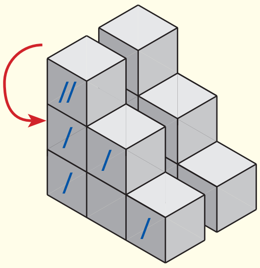
We can begin by painting the half-staircase on the left side.

First we'll consider each face that points upwards.

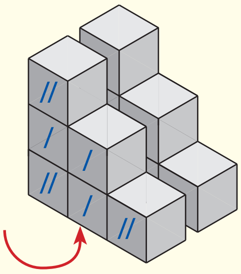
If a face would get painted, we can mark that cube with a tally mark.



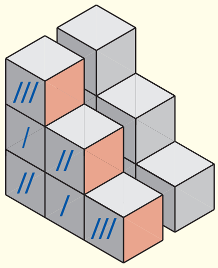
We can now paint the back of the staircase,



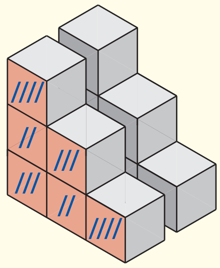
the under-side of the staircase,



the front face (or stair risers),



and the side of the staircase.



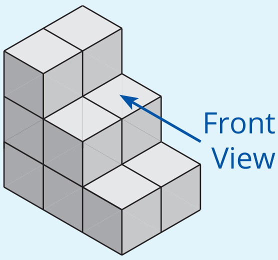
There are 4 + 2 + 3 + 3 + 2 + 4 = 18 painted faces on the left half of the staircase.

By symmetry, there would be just as many painted faces on the right half of the staircase.

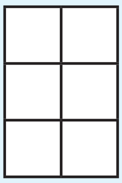
There are **18** + **18** = **36** painted faces.

Strategy 2: Draw a Diagram

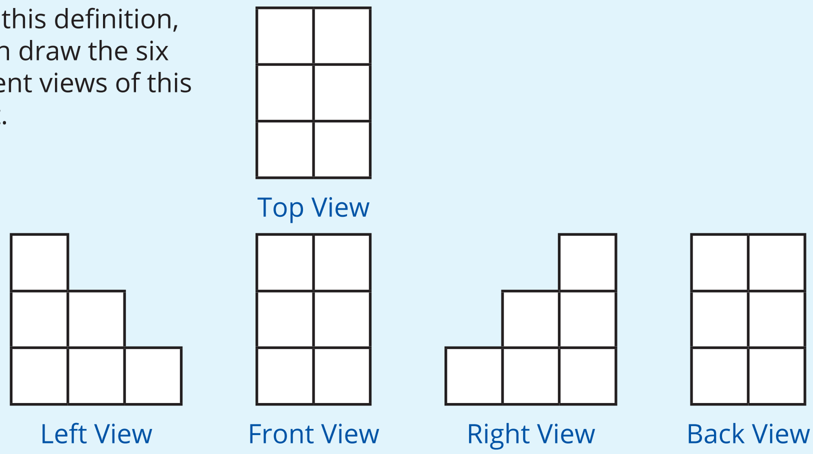
Let's define this direction as the "front view" of the staircase.

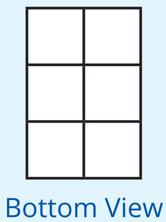


Looking squarely from the front, the staircase would look like this.



Using this definition, we can draw the six different views of this object.





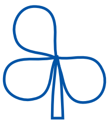
Since six squares are visible from each direction, Sam painted **6 × 6 = 36** exposed faces.

Answer 36

Preparation Task 4

A) Portia drew 12 stems, each with 3 leaflets.

Complete Portia's drawing.

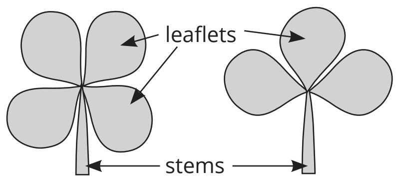


Sean has a patch of clover growing in his garden.

Some of the stems have 4 leaflets. All of the other stems have just 3 leaflets.

There are 12 stems and 40 leaflets.

How many of the stems have 4 leaflets?



Explain how Portia could use this drawing to work out how many stems have 4 leaflets.

B) Peter decided to use a table to solve this problem.

Find a pattern in Peter's table that can help to work out how many stems have 4 leaflets.

Stems with 4 leaflets	12	11	10						
Stems with 3 leaflets	0	1	2						
Total leaflets	48	47	46						

C) Portia looked at Peter's table.

She said,

"I think we had basically the same idea, but I started with 12 stems that had 3 leaflets.

You started with 12 stems that had 4 leaflets."

Can you fill in the table to represent Portia's solution method?

Stems with 3 leaflets	12	11	10						
Stems with 4 leaflets	0	1	2						
Total leaflets	36								

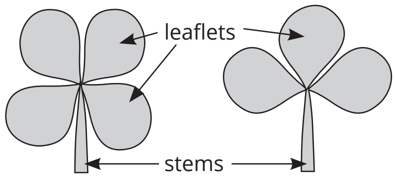
Maths Games Example Solution - Preparation Task 4

Sean has a patch of clover growing in his garden.

Some of the stems have 4 leaflets. All of the other stems have just 3 leaflets.

There are 12 stems and 40 leaflets.

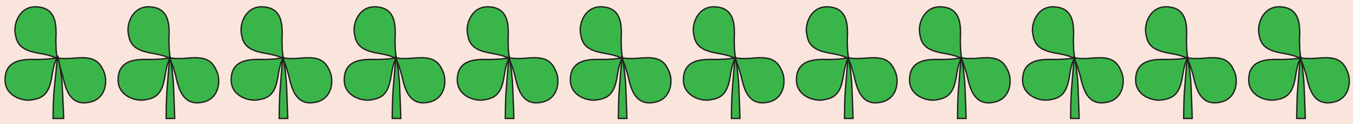
How many of the stems have 4 leaflets?



Strategy 1: Convert to a More Convenient Form

We have **12** stems.

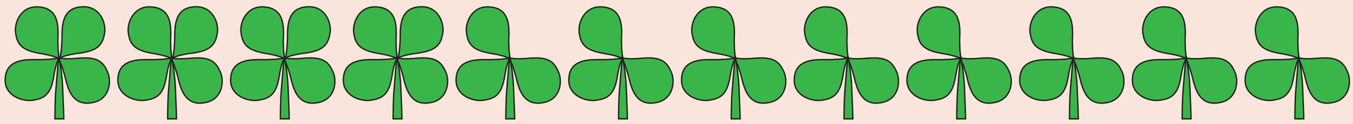
Each stem has at least **3** leaflets.



So far, we have drawn **12 × 3 = 36** leaflets.

There are **40** leaflets in total. So we have **40 – 36 = 4** leaflets remaining.

Let's add the **4** remaining leaflets on to some of the clovers to turn them into four-leaf clovers.



4 of the stems have 4 leaflets.

Strategy 2: Build a Table, and Find a Pattern

We can begin by supposing that all 12 stems have 4 leaflets.

Then, we can begin to replace them with stems that have 3 leaflets.

Stems with 4 leaflets	12	11	10						
Stems with 3 leaflets	0	1	2						
Total leaflets	48	47	46						

Every time we exchange 4 leaflets for 3 leaflets, the number of leaflets decreases by **1**.

To reduce the number of leaflets from **48** down to **40**, we would need to change **48 – 40 = 8** stems to have 3 leaflets each.

Stems with 4 leaflets	12	11	10	9	8	7	6	5	4
Stems with 3 leaflets	0	1	2	3	4	5	6	7	8
Total leaflets	48	47	46	45	44	43	42	41	40

There are **8** stems that have **3** leaflets, and **4** stems that have **4** leaflets.

Answer 4

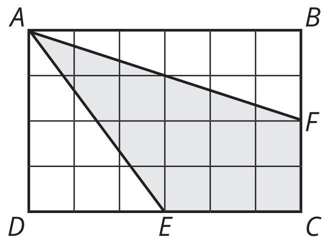
Set Orange

4.1) What is the value of (74 × 50) – (32 × 50) – (22 × 50)?

4.2) The diagram shows a rectangle *ABCD* which is divided into 24 identical squares.

Quadrilateral *AFCE* (shaded) has an area of 48 square centimetres.

What is the area of *ABCD*, in square centimetres?

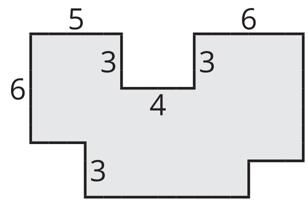


4.3) The figure at the right is made by overlaying three rectangles on top of one another.

All angles in the figure are right angles.

All lengths are given in centimetres.

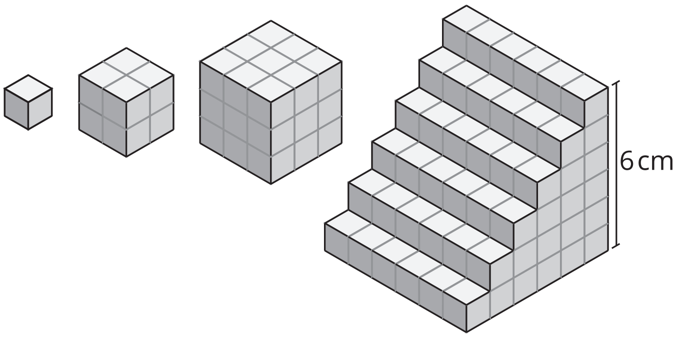
What is the perimeter of the figure, in centimetres?



4.4) Gary has a lot of wooden cubes, with edges that are 1 cm, 2 cm, or 3 cm long.

He makes the staircase on the right by stacking cubes on a flat surface.

What is the smallest possible number of cubes required to make this staircase?



Example Problem 4.1 - Summary

Example Problem 4.1 - Green

What is the value of 5 × 50 – 4 × 40 + 3 × 30 – 2 × 20 + 1 × 10?

Example Problem 4.1 - Yellow

What is the value of 5 × 55 – 4 × 44 + 3 × 33 – 2 × 22 + 1 × 11?

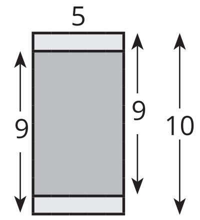
Example Problem 4.1 - Orange

What is the value of (74 × 50) – (32 × 50) – (22 × 50)?

Example Problem 4.2 - Summary

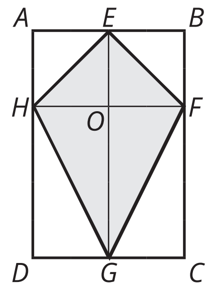
Example Problem 4.2 - Green

Two 5 cm × 9 cm rectangles overlap as shown to form a 5 cm × 10 cm rectangle.
What is the **area** of the overlapping rectangular region, in centimetres?



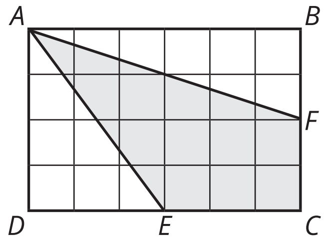
Example Problem 4.2 - Yellow

ABCD is a rectangle with an area of 24 square centimetres.
Points *E* and *G* are midpoints of the sides on which they are located.
The line *HF* is parallel to the line *AB*.
What is the area of the kite *EFGH*?



Example Problem 4.2 - Orange

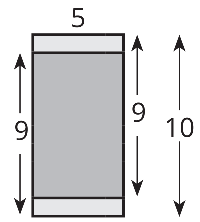
The diagram shows a rectangle *ABCD* which is divided into 24 identical squares.
Quadrilateral *AFCE* (shaded) has an area of 48 square centimetres.
What is the area of *ABCD*, in square centimetres?



Example Problem 4.3 - Summary

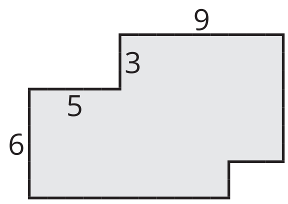
Example Problem 4.3 - Green

Two 5 cm × 9 cm rectangles overlap as shown to form a 5 cm × 10 cm rectangle.
What is the **perimeter** of the overlapping rectangular region, in centimetres?



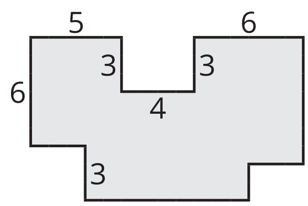
Example Problem 4.3 - Yellow

The figure at the right is made by placing one rectangle on top of another.
All angles in the figure are right angles.
All lengths are given in centimetres.
What is the perimeter of the figure, in centimetres?



Example Problem 4.3 - Orange

The figure at the right is made by overlaying three rectangles on top of one another.
All angles in the figure are right angles.
All lengths are given in centimetres.
What is the perimeter of the figure, in centimetres?



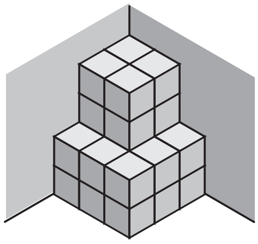
Example Problem 4.4 - Summary

Example Problem 4.4 - Green

This tower is in the corner of the room.

It was made by placing identical cubes on top of each other with no gaps.

How many cubes were used to build the tower?



Example Problem 4.4 - Yellow

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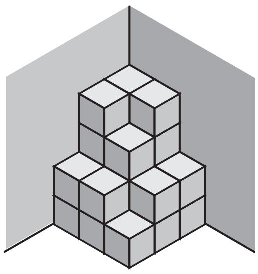
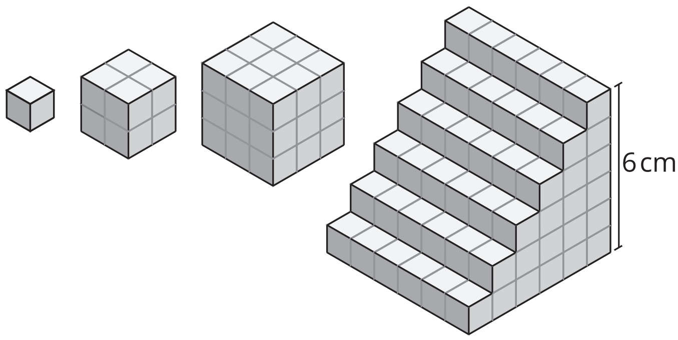


Example Problem 4.4 - Orange

Gary has a lot of wooden cubes, with edges that are 1 cm, 2 cm, or 3 cm long.

He makes the staircase on the right by stacking cubes on a flat surface.

What is the smallest possible number of cubes required to make this staircase?



Answers

Set Yellow		Set Green		Preparation Tasks		Set Orange	
4.1	165	**4.1**	150	**1**	Same	**4.1**	1000
4.2	12 (cm^2)	**4.2**	40 (cm^2)	**2**	252 (cm^2)	**4.2**	96 (cm^2)
4.3	46 (cm)	**4.3**	26 (cm)	**3**	36	**4.3**	54 (cm)
4.4	24	**4.4**	26	**4**	4	**4.4**	32