

St Faith's
C A M B R I D G E



Sample Mathematics Paper

for entry into
Year 7

Entry assessment for pupils planning to join St Faiths in Year 7 (Mathematics)

All pupils planning to enter the school in year 7 next September will be assessed on work covering the following topics.

The work will be set at levels 3, 4 and 5 of the National Curriculum.

The Number System and Place Value.

Number Relationships

Calculations

Solving Numerical Problems

Algebraic manipulation

Equations and Formulae

Functions and Graphs

Angle

Shape

Symmetry and transformation

Movement

Position and coordinates

Measures

Representing and processing Data

Interpreting Data

The questions will be a mixture of calculations and word problems, followed by a short investigation, and credit will be given for clearly shown accurate working. For part of the assessment a calculator will be provided.

Sample Questions

1

Circle two different numbers which **multiply** together to make **1 million**.



10

100

1000

10000

100000

2

Peanuts cost **60p** for **100 grams**.

What is the cost of **350 grams** of peanuts?

Raisins cost **80p** for **100 grams**.

Jack pays **£2** for a bag of raisins.




How many **grams of raisins** does he get?

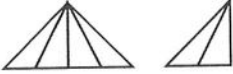
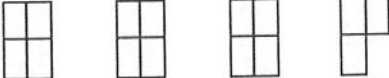

3

A camping shop sells **tents**, **sleeping bags** and **backpacks**.

This chart shows how many of each they sold in June.

Items sold in June

 is 4 tents	 is 4 sleeping bags	 is 4 backpacks
-----------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------

tents	
sleeping bags	
backpacks	

The shop had **20** sleeping bags at the **beginning of June**.

How many of these sleeping bags did the shop have left at the **end of June**?

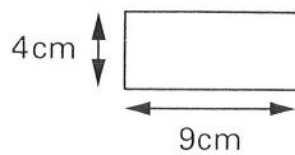
In **July**, the shop sold **three times as many tents** as in June.

How many tents did the shop sell in **July**?

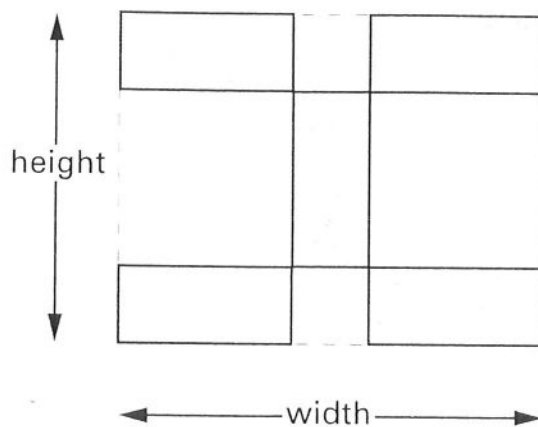
4

Kim has some rectangular tiles.

Each one is **4 centimetres** by **9 centimetres**.



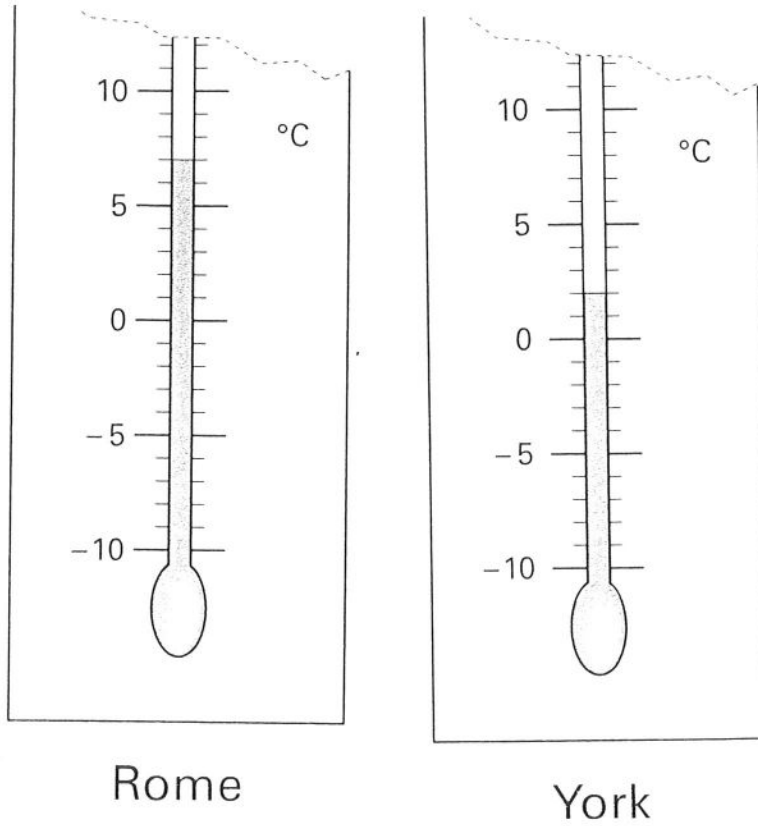
She makes a design with them.



Calculate the **width** and **height** of her design.

5

These are the temperatures in York and Rome on a day in winter.



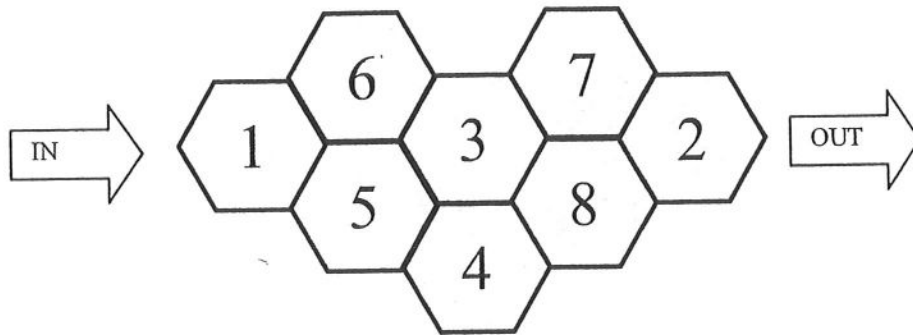
How many degrees **colder** is it in York than in Rome?

On another day, the temperature in York is **4°C**

Rome is **7 degrees colder** than York.

What is the temperature in **Rome**?

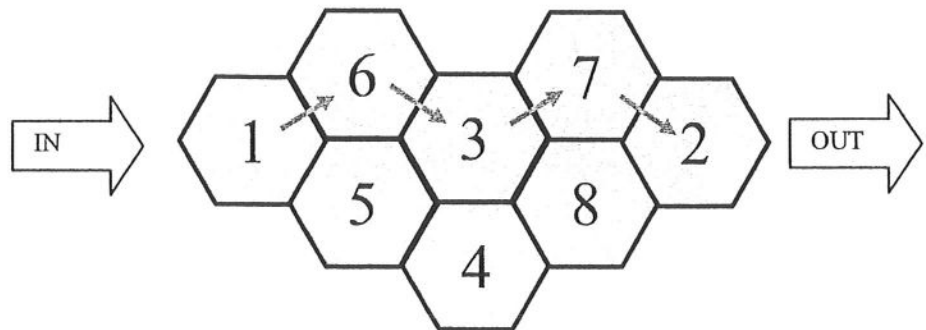
Hexagon addition Investigation



Find a route through the maze from the IN to the OUT without going through any hexagon twice.

Add up the numbers as you go.

What total did you get?



This route goes through $1 + 6 + 3 + 7 + 2 = 19$

Can you find a route through which is less than 19?

Can you find a route through which is more than 19?

How many different routes can you find?

Which route gives you the largest total?