



Mathematics

Level 1

Challenge: Football Crazy

Introduction

Name:

Date:

In this challenge, you are a member of the local football club and have recently been asked to take over as club secretary. Some of the duties you have been asked to perform, in preparation for the new season, are:

- to order turf and fencing for the home ground
- to work out the cost of these improvements
- to organise the cup draws for the coming season

Once you have completed the challenge, compare your answers with those on the 'Solution' sheets.

Equipment

It would be useful to have the following equipment handy:

- a calculator
- a pen or pencil
- an eraser

If you find it helpful, use the 'Your notes' area for any working out you need to do.

Learning

In this challenge, you will be covering the areas detailed below:

Key Skills

- Work out areas of rectangular spaces [N1.2.1]
- Add and subtract, with whole numbers and simple decimals [N1.2.1]
- Multiply and divide a simple decimal by a whole number [N1.2.1]

Functional Skills Mathematics Level 1

- Find the area and perimeter of rectangles and squares
- Add and subtract decimals up to two decimal places with money
- Use addition, subtraction, multiplication and division in context
- Use probability to show that some events are more likely to occur than others



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Glossary

subtract

To take away one amount from another

addition

The process of adding two or more numbers together

decimal place

The position of a digit after the decimal point. For example, in 4.26, '6' is in the second decimal place and 2 is the first decimal place

area

The measurement of a surface

perimeter

The distance around the outer edges of an area

probability

The likelihood of something happening



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Task 1 of 3

Task 1

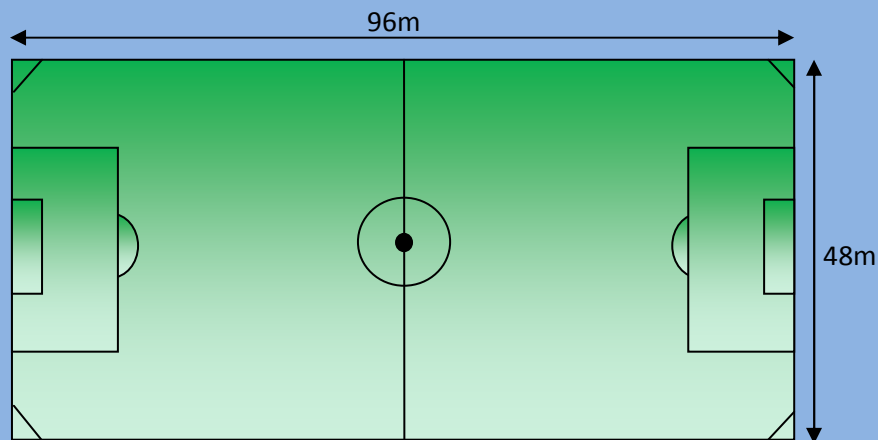
The home ground is in urgent need of repair before the new season begins. Your first job as club secretary is to find out what needs to be done, and then order the appropriate materials.

You identify that the pitch needs reurfing and the fence surrounding the pitch needs replacing. Before you can place an order, you need to work out how much turf and fencing you require. To do this, you must calculate the area and perimeter of the pitch.

Look at the diagram below and make the required calculations. Write your answers in the boxes provided. Don't forget to include the unit of measurement in your answers.

Show your working out in the 'Your notes' area.

What difference would it make to the amount of turf and fencing needed if you leave a 2m border around the edge of the pitch?



The amount of turf needed is:

With a 2m border, the amount of turf needed is:

The length of fencing needed is:

With a 2m border, the length of fencing needed is:

Your notes



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Task 2 of 3

Task 2

So, you've worked out how much material you require, now you need to calculate the total cost. You find out that turf costs £1.80 per square metre and fencing costs £18.50 per metre. Coopers, the company you are going to buy the material from, also gives a discount of 5% for orders over £10,000.

Complete the order form below by writing the missing amounts into the blank boxes. Show your working out in the 'Your notes' area.

Coopers

Quality assurance
guaranteed

Order Form

Description	Price/unit	Qty	Total
Turf	£1.80/sq m		
Fencing	£18.50/m		
		Sub Total	
		Discount	
		Net Cost	
		VAT 17.5%	
		Total incl VAT	

Your notes



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Task 3 of 3

Task 3

Your final task is to organise the cup draws for the coming season. This is done by placing the names of all the teams in to a container then drawing them out one by one.

What is the probability that Burton Albion will be the first team drawn? Circle the answer you think is correct and explain why in the 'Your notes' area.

What are the chances that Wrexham will play away and why?

Barrow	Mansfield Town
Burton Albion	Northwick Victoria
Crawley Town	Oxford United
Eastbourne Borough	Rushden & Diamonds
Ebbsfleet United	Salisbury City
Forest Green Rovers	Stevenage Borough
Grays Athletic	Torquay United
Histon	Weymouth
Kettering Town	Woking
Kidderminster Harriers	Wrexham

Burton Albion V ?

2%

5%

10%

50%

? V Wrexham

2%

5%

10%

50%

Your notes