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# Introduction to Practical Forestry Skills Level 2

**BTEC First**

**Unit code: A/600/9406**

**Credit Value – 10**

**Learner name .....**



## **Unit content**

Throughout this unit there will be four main learning outcomes for you to cover in order to achieve this qualification, that are listed below.

1. Be able to use a range of basic woodland establishment and maintenance techniques
2. Be able to carry out basic measurements of standing trees, timber products and woodland sites
3. Be able to carry out simple harvesting operations
4. Understand environmental and waste management issues associated with woodland operations

Throughout this qualification you will cover a range of different forestry tasks including planting trees, using a range of different tools and equipment, creating risk assessments for safe working practices, carrying out measurement of trees, carry out harvesting operations and be able to understand environmental and waste management issues within woodland work.

The marking system is carried out in 3 different methods – pass, merit and distinction. Pass being the lowest of the three and distinction being the highest. These are judged on how well you answer the questions within this booklet and how much evidence and information on the relevant subjects you can give.





### Identifying Potential Risks

Below is an example of a blank risk assessment. These are carried out to identify dangers and way of minimising dangers.

Your task it to carry out a risk assessment on the area of woodland you have selected to manage and input into the table below and possible hazards you may encounter while carrying out the preparation of the site.

<b>Hazard</b>	<b>Danger</b>	<b>Control measures</b>	<b>Severity of injury</b>	<b>Likelihood- Probable/ Possible/ Remote</b>	<b>Risk factor- High/ Medium/ Low</b>

Student sign: ..... Date: .....

### The Woodland

Below is the section of woodland you have selected to carry out woodland management and to carry out new planting. Once you have carried out the risk assessment on the site you must now stick in some photographs of the site and explain how the site needs to be maintained and prepared.

What kind of obstacles do you think you may encounter within the woodland?

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### **Obstacles and maintaining the site**

While carrying out the risk assessment of the site your task is to identify the different hazards, obstacles or limitations. During your site visit take some photos and stick them in the boxes below and explain what is happening.


**Why do we carry out Woodland Management**

From looking at the two documents on woodland management and why this is carried out, you must outline the factors that impact on the establishment of woodlands.

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Now can you describe the importance of managing woodlands for biodiversity and conservation.

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## Working out Perimeter and Area

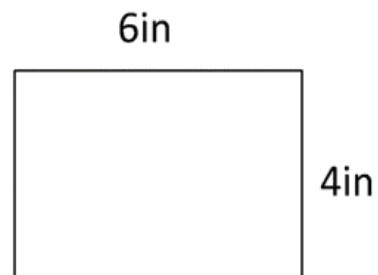
Within this unit you will be tasked with calculating the area and perimeter of the selected woodland. The two tasks below will give you an understanding of how to correctly work out the perimeter (the outer most parts of an area) and the area (the measurement of a surface or piece of land)

1)



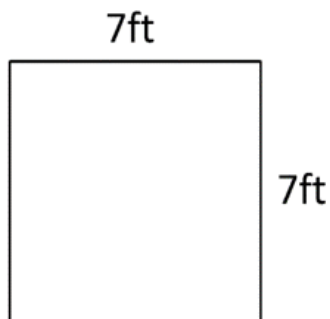
Perimeter = \_\_\_\_\_ cm

2)



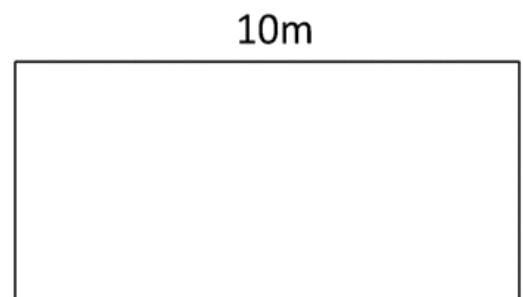
Perimeter = \_\_\_\_\_ in

3)



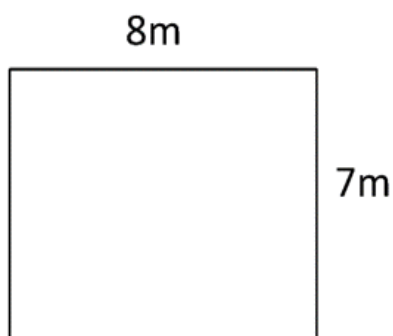
Perimeter = \_\_\_\_\_ ft

4)



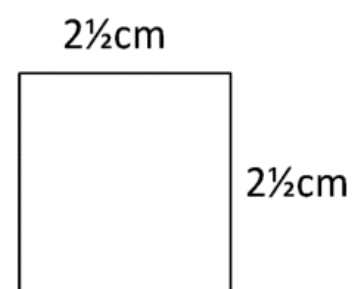
Perimeter = \_\_\_\_\_ m

5)



Perimeter = \_\_\_\_\_ m

6)

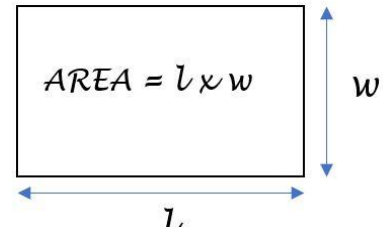


Perimeter = \_\_\_\_\_ cm

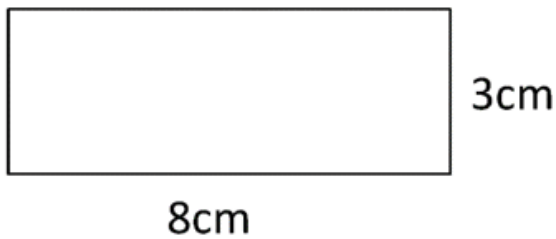


## Calculating Area

Now you must try and work out the area of the below shapes. The area is the length multiplied by the width.

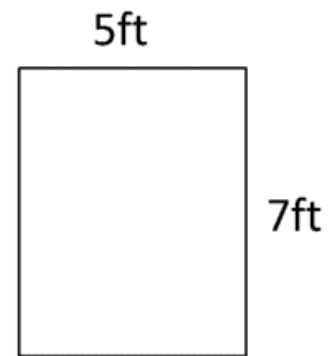


1)



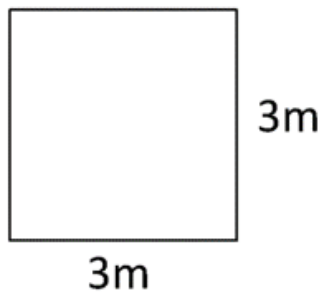
Area = \_\_\_\_\_ square cm

2)



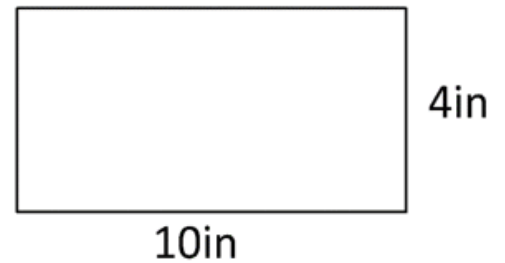
Area = \_\_\_\_\_ square ft

3)



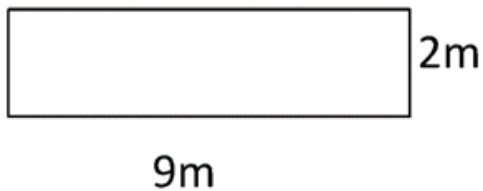
Area = \_\_\_\_\_ square m

4)



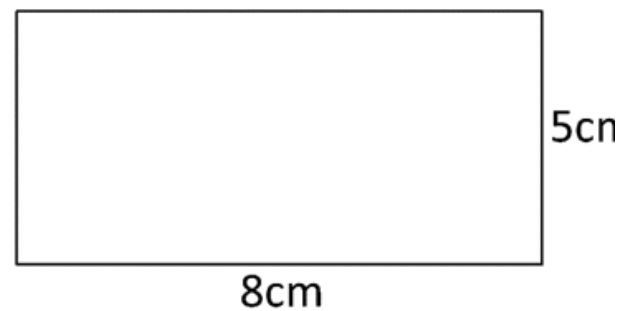
Area = \_\_\_\_\_ square in

5)



Area = \_\_\_\_\_ square m

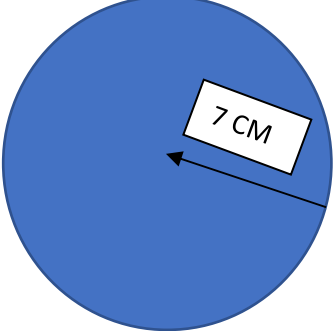
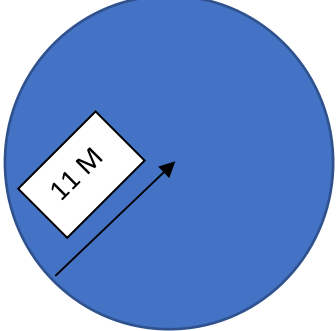
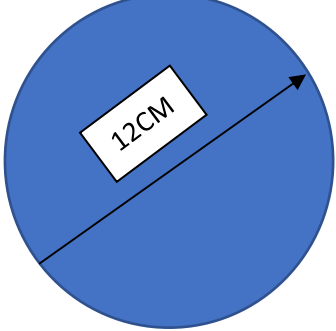
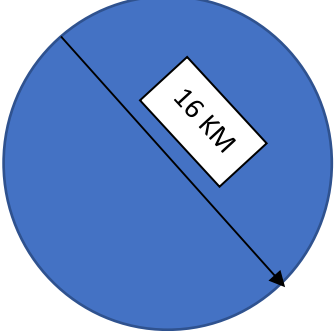
6)



Area = \_\_\_\_\_ square cm

## Calculating Radius, Diameter and Circumference

Our task is to find the radius, diameter and circumference of each circle. Use 3.14 for pi. The previous handout will help you with these calculations.

	<p>The radius of this circle is _____</p> <p>The Diameter of this circle is _____</p> <p>The Circumference of this circle is _____</p>
	<p>The radius of this circle is _____</p> <p>The Diameter of this circle is _____</p> <p>The Circumference of this circle is _____</p>
	<p>The radius of this circle is _____</p> <p>The Diameter of this circle is _____</p> <p>The Circumference of this circle is _____</p>
	<p>The radius of this circle is _____</p> <p>The Diameter of this circle is _____</p> <p>The Circumference of this circle is _____</p>

## Diameter at Breast Height – DBH

Diameter at breast height, or DBH, is a standard method of expressing the diameter of the trunk of a standing tree. DBH is one of the most common dendrometric measurements. Tree trunks are measured at the height of an adult's breast.

The two main methods of carrying out these measurements are girthing or a diameter tape (tailors tape) and calipers which are secured to the tree and give a measurement of the two opposite sides of the tree.



Your task within your group is to visit a site and using tree diameter tape, take measurements from three different trees and record them in the table below.

Firstly find the circumference and record it in the table below. From this finding you must divide the circumference by pi (Circumference  $\div$  3.14) which will give you the diameter.

Lastly to find radius of the of the circle you must divide the diameter by 2 (Diameter  $\div$  2)

The Tree	Circumference	Diameter	Radius
1			
2			
3			

## Carrying out Woodland Management

When carrying out woodland management it is important to understand what needs to be removed and how it is going to leave the woodland, ensuring the safety and wellbeing of self and others within the area.

During your visit to the woodland undertake a survey and make a decision on what will need to be extracted from the woodland and how this is going to happen.

List some of the ways in which the timber could be extracted from the site.

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Have a discussion within your group and with your tutor and decide what you feel would be the best method to carry out the extraction. Explain your reason for choosing this method.

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## Carry out Felling, Stacking & Extracting

By now you will understand what needs to be carried, how you are going to carry it out, what tools will be needed and as well as all the above carry out work safely and to a good standard.

Your task is to carry out woodland management and fella small tree, cut the tree to the desired specification, stack the tree/timber and extract from the site.

Make a list of the tools and PPE you will require to carry out this activity

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State what type of trees will be extracted and how they will be cut

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Explain how teamwork during the activity will benefit the operation

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## Woodland Management

In the space below stick in some photographs of you carrying out woodland management, stacking and extracting and explain what you are doing.

P6	

**The Impact of Forest Operations**

Within your group discuss the possible impacts forest operations could have on local wildlife and watercourses.

Impact on wildlife .....

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Impact on watercourses .....

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**Forest Operations – Waste management**

When carrying out forestry operations it is important to understand how to deal with waste. Describe below what waste could be created from carrying out forestry operations.

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