

**Exercise 1**

Calc. : ✓

There are 30 days in November.  
 18 days had rain,  
 14 days had fog,  
 and 7 days had neither fog nor rain.



1. Draw a Venn diagram or a two-way table that illustrates the situation.

4 marks

A day is selected at random

2. What is the probability that there is fog and it rains?
3. What is the probability that there is rain and no fog?
4. What is the probability that there was fog given that there was rain?

2 marks

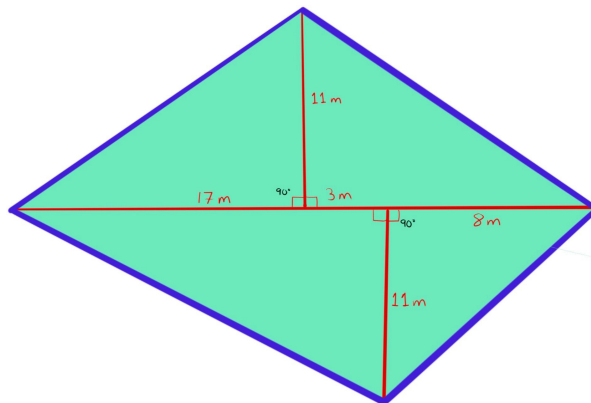
2 marks

2 marks

**Exercise 2**

Calc. : ✓

The following diagram is the shape of a big park in Bad Vilbel



1. How many meters of fence is required for the perimeter of the shape?
2. Find the area of the park.

8 marks

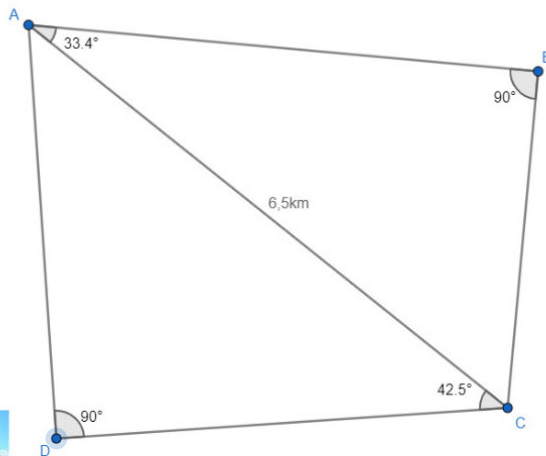
7 marks

Round your answers to one decimal place.

**Exercise 3**

Calc. : ✓

The Becker family wants to go on a hike. For this purpose, Mr Becker made a sketch of the places that everyone would like to visit.

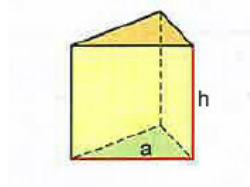


1. Calculate the distance from the oak (C) to the waterfall (B). 5 marks
2. The children would rather go from the oak (C) to the lake (D) instead of the waterfall. They think this way is shorter. Are the children right? Justify your answer. 5 marks
3. How long is the walk from the waterfall (B) to the castle (A) and then the lake (D)? 5 marks

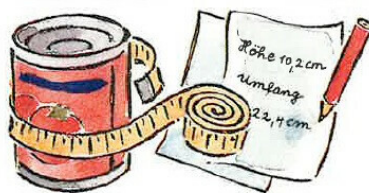
**Exercise 4**

Calc. : ✓

1. A triangular prism has height  $h = 12$  cm. The base of the prism is an equilateral triangle with side length  $a = 10$  cm. Calculate the surface area of the prism. 5 marks



2. A cylindrical tin can has a height of 10.2 cm and a circumference of 22.4 cm. Calculate the volume of the tin can in milliliters. 5 marks



Round to the nearest decimal place.