**Math Retake Test Paper 1**  **Marks: 40**

**Name**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Time: 50min.**

1. (a) Evaluate [1]

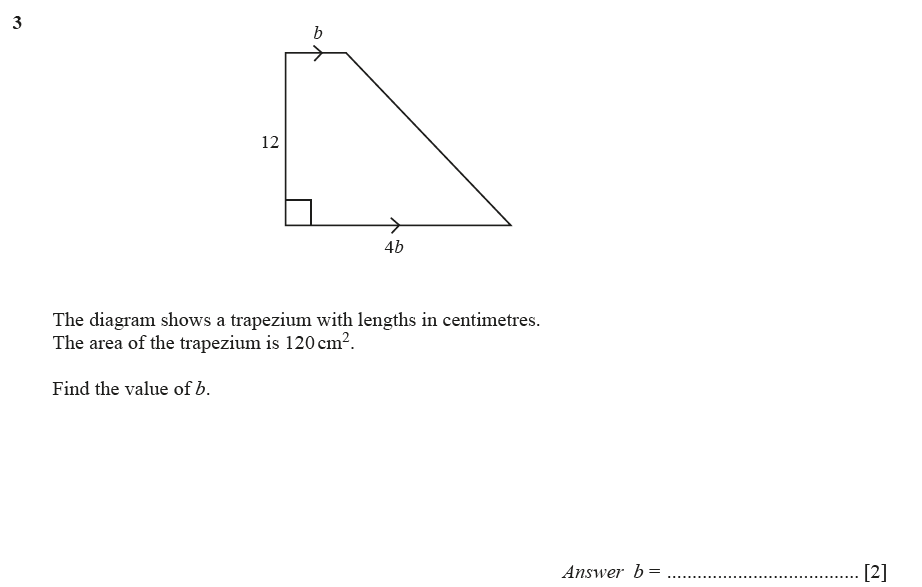
(b) Evaluate [1]

1. (a) Expressas a fraction in its simplest form. [1]

(b) Arrange these fractions in order, beginning with the smallest. [1]

1. Estimate, correct to the nearest whole number, the value of [1]

Expressing each answer in standard form, find



1. [1]
2. [1]
3. The diagram shows a trapezium with lengths in centimetres.

The area of the trapezium is 120.

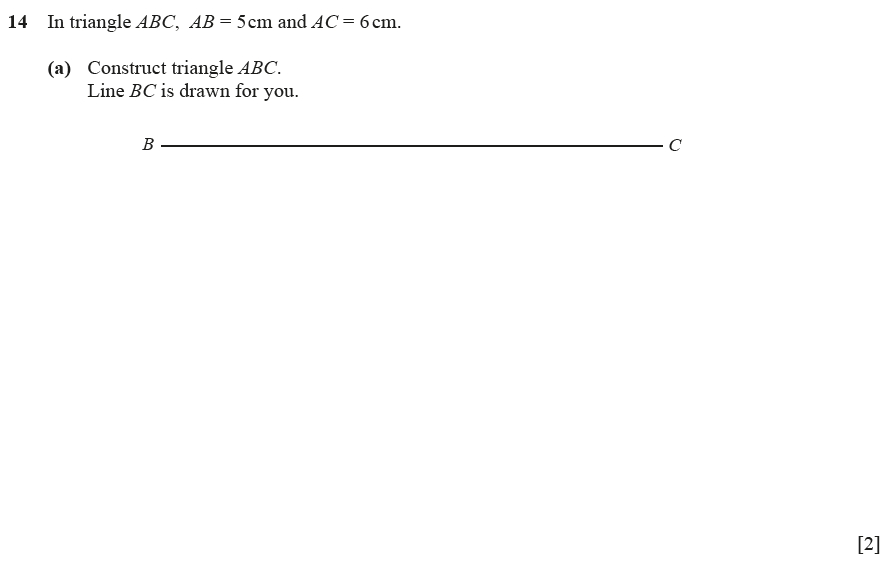
Find the value of . [2]

1. (a) Write in standard form. [1]
2. Giving your answer in standard form, evaluate

. [1]

1. In the triangle , ,
2. Construct triangle. [2]

Line is drawn for you.



1. Measure angle in your triangle. [1]
2. Fatima travels from London to Astana.

The time in Astana is hours ahead of the time in London, so when it is in London the local time in Astana is .

She flies from London to Moscow and then from Moscow to Astana.

The flight leaves London at and takes hours to reach Moscow.

Fatima waits hours in Moscow for the flight to Astana.

She arrives in Astana at local time.

How long did the flight from Moscow to Astana take? [2]

2. Find when and [1]
3. Rearrange the formula to make the subject. [2]
4. The scale of a map is .
5. The scale can be written as .

Find . [1]

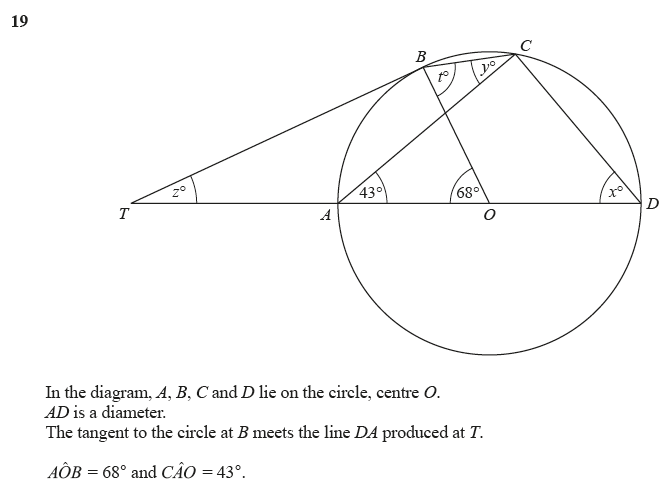
1. He distance between two villages is 8km.

Find the distance, in centimeters, between the two villages on the map. [1]

1. Given that write down the value of
2. [1]
3. [2]
4. [1]
5. In the diagram and lie on the circle, centre .

is a diameter. The tangent to the circle at meets the line produced at .

and . Find , and . [4]

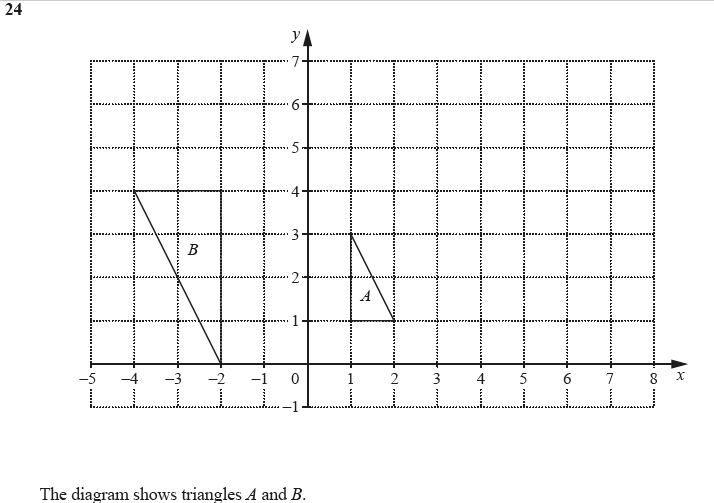


1. The diagram shows triangles and .
2. Triangle is mapped onto triangle by an enlargement.

Find the scale factor, and the centre, for this enlargement. [2]

1. Triangle is mapped onto triangle by a stretch, with invariant line the -axis and stretch factor 2.

Draw triangle . [2]

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1. Solve the simultaneous equations. [3]
2. The first four terms of a sequence, , are .

Find an expression for , the th term of this sequence [2]

1. is inversely proportional to the square of .

Given that when , find when [2]