

Topics

Complex Number – Can I perform complex number division?

Last Needed - 2021

1 ► 2006 LCOL Paper 1 – Question 4 (c) (i)

Area, Perimeter and Volume – Can I use the trapezoidal rule to estimate area?

Last Needed – 2014 Sample

2 ► 2010 NCAA LCOL Paper 2 – Question 1 (b)

Differentiation – Can I use the power rule to differentiate?

Last Needed - 2022

3 ► 2009 LCOL Paper 1 – Question 6 (c)

Trigonometry – Can I use the cosine rule to find the missing side of a triangle?

Last Needed - 2022

4 ► 2009 LCOL Paper 2 – Question 5 (c) (i)

Geometry – Can I use geometry to solve parallelograms?

Last Needed - 2019

5 ► 2003 JCHL Paper 2 – Question 4 (a)

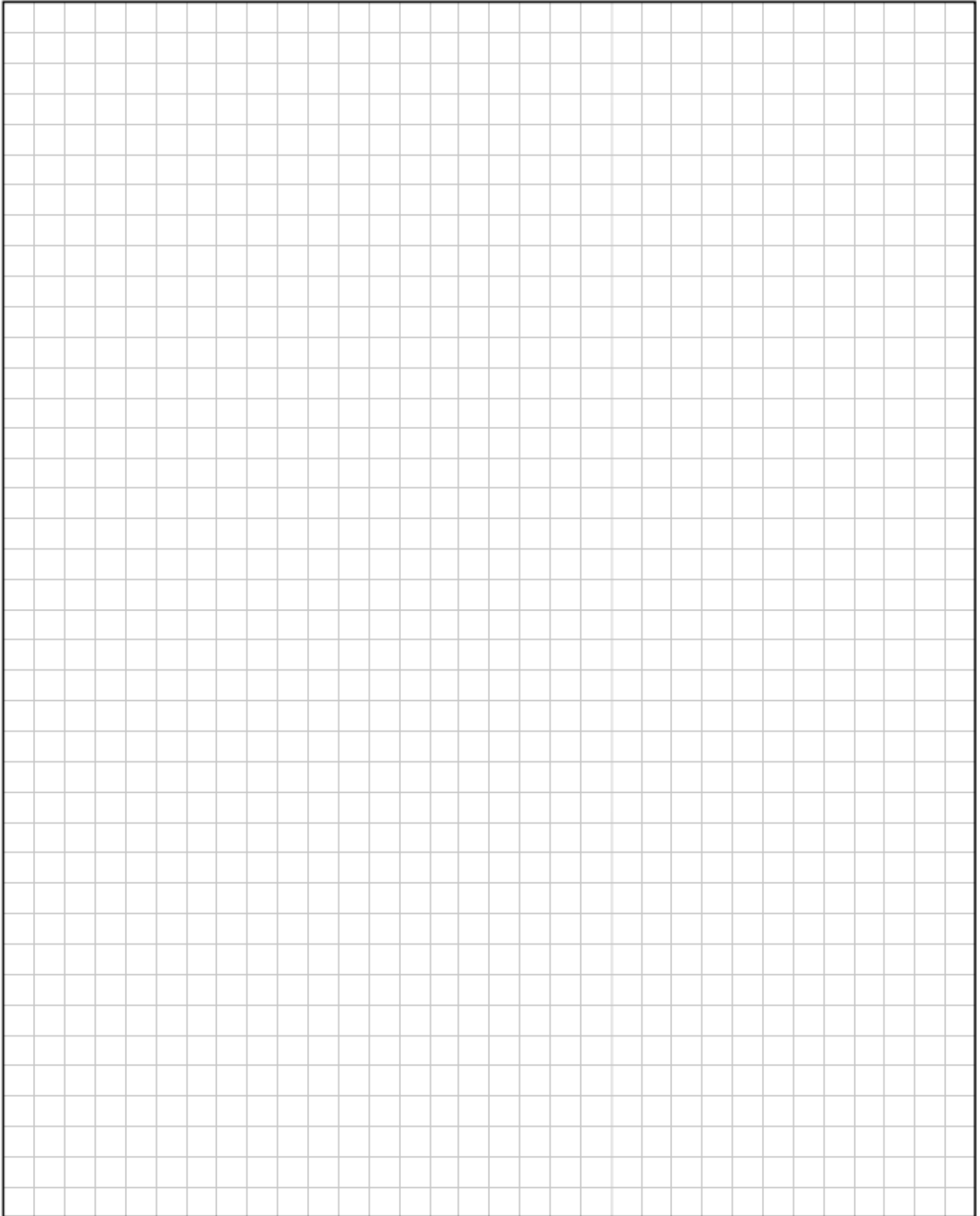
www.mathspoints.ie for **worked solutions** to these questions.

 [LCOL Resources by Topic](#)

 [LCOL Weekly Revision](#)

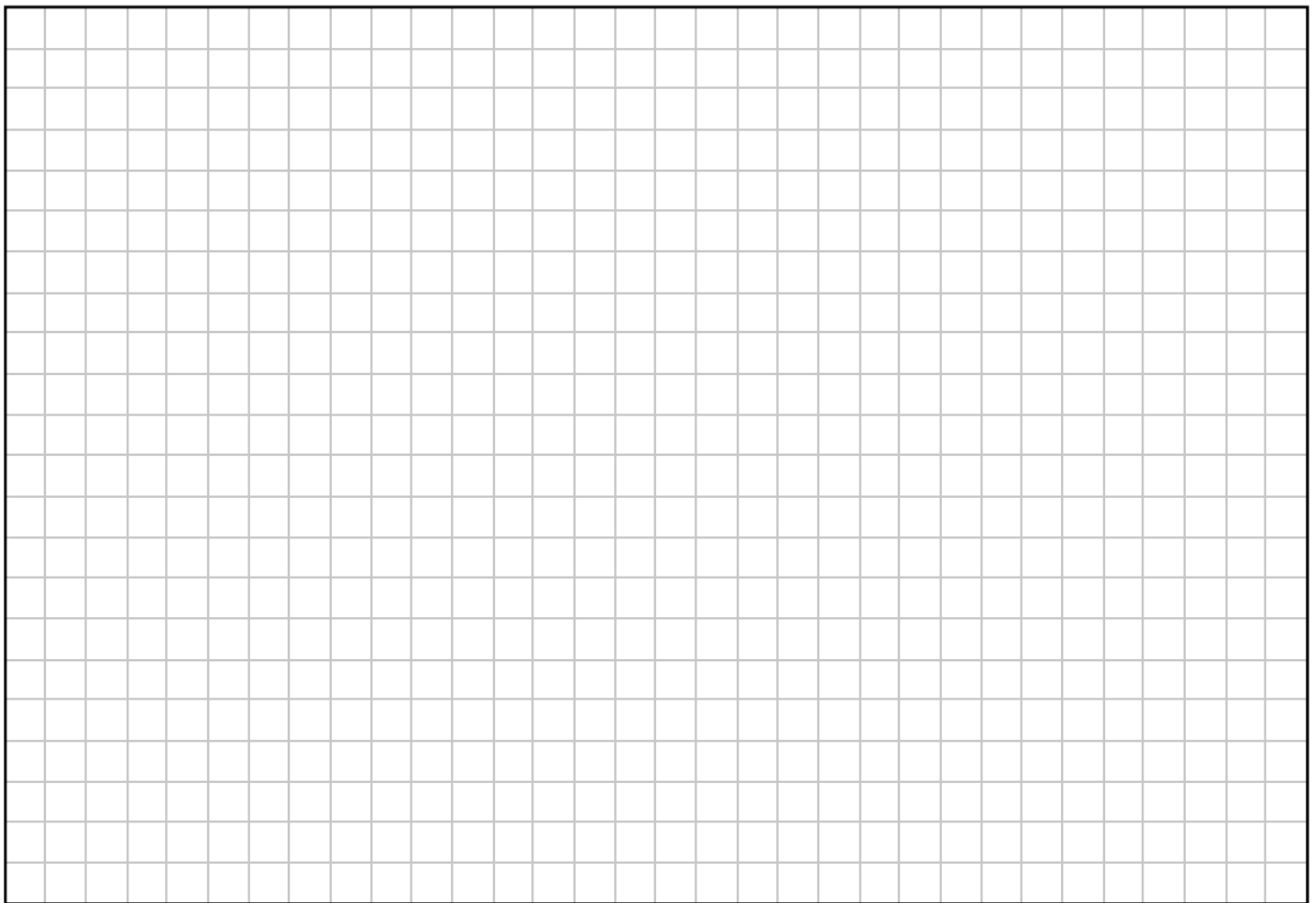
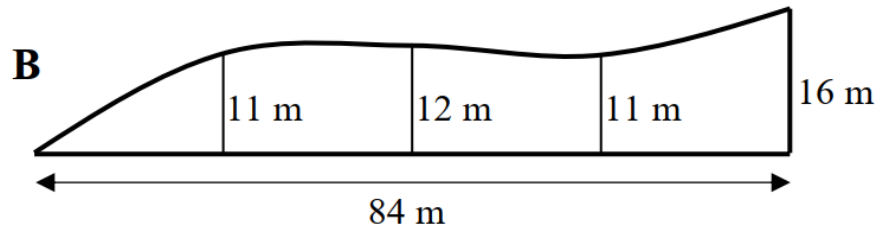
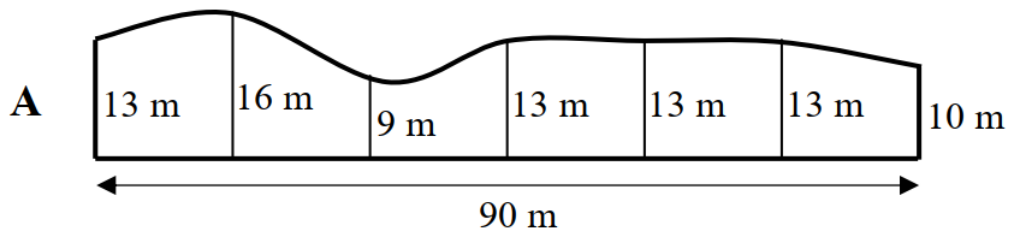
1 ► 2006 LCOL Paper 1 – Question 4 (c) (i)

Express $\frac{3-2i}{1-4i}$ in the form $x + yi$.



2 ► 2010 NCAA LCOL Paper 2 – Question 1 (b)

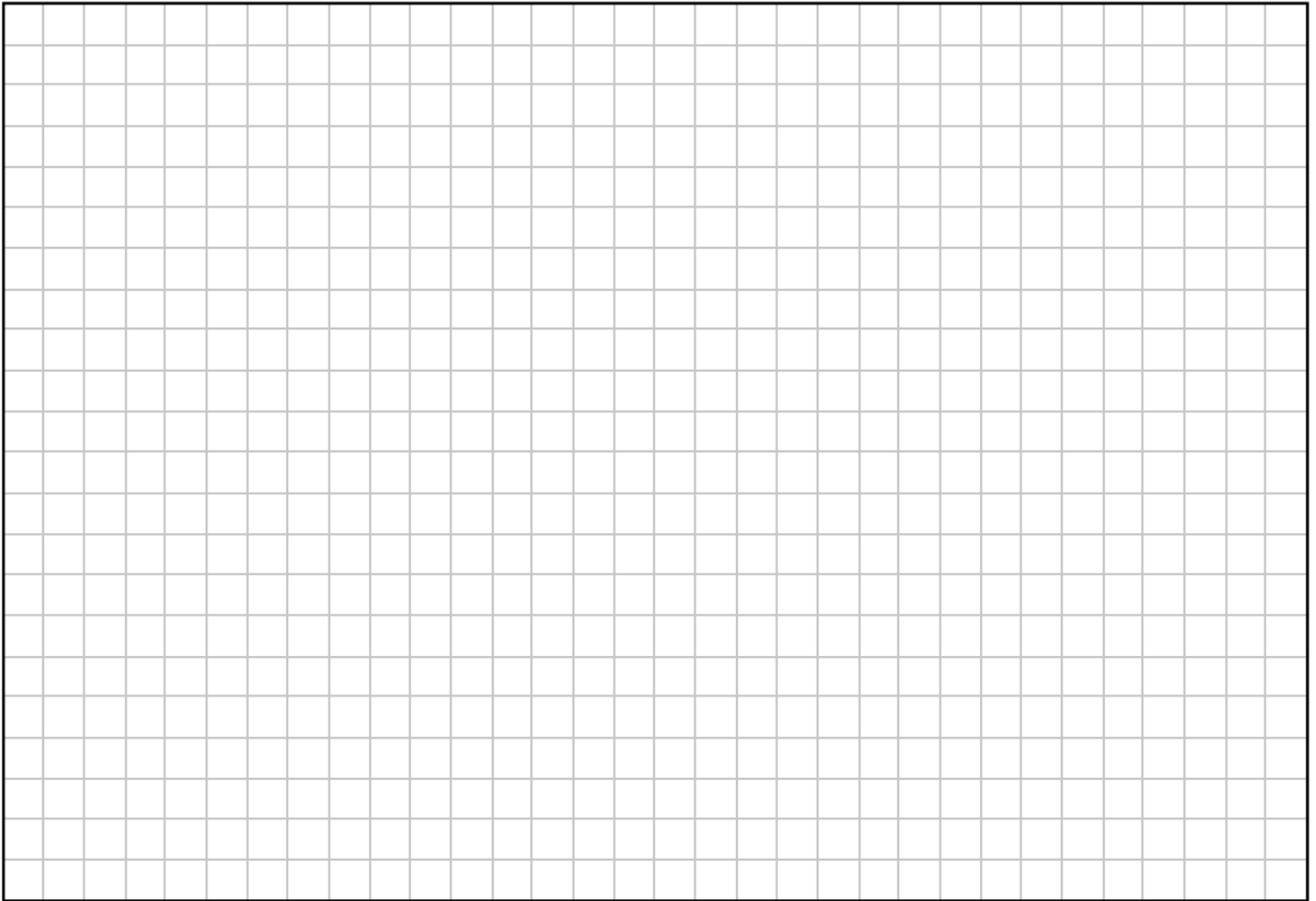
Use the Trapezoidal Rule to determine which of the shapes A or B below has the greater area, and by how much.



3 ▶ 2009 LCOL Paper 1 – Question 6 (c)

Let $f(x) = x^3 - 6x^2 + 9x - 3$.

Find $f'(x)$, the derivative of $f(x)$.



4 ► 2009 LCOL Paper 2 – Question 5 (c) (i)

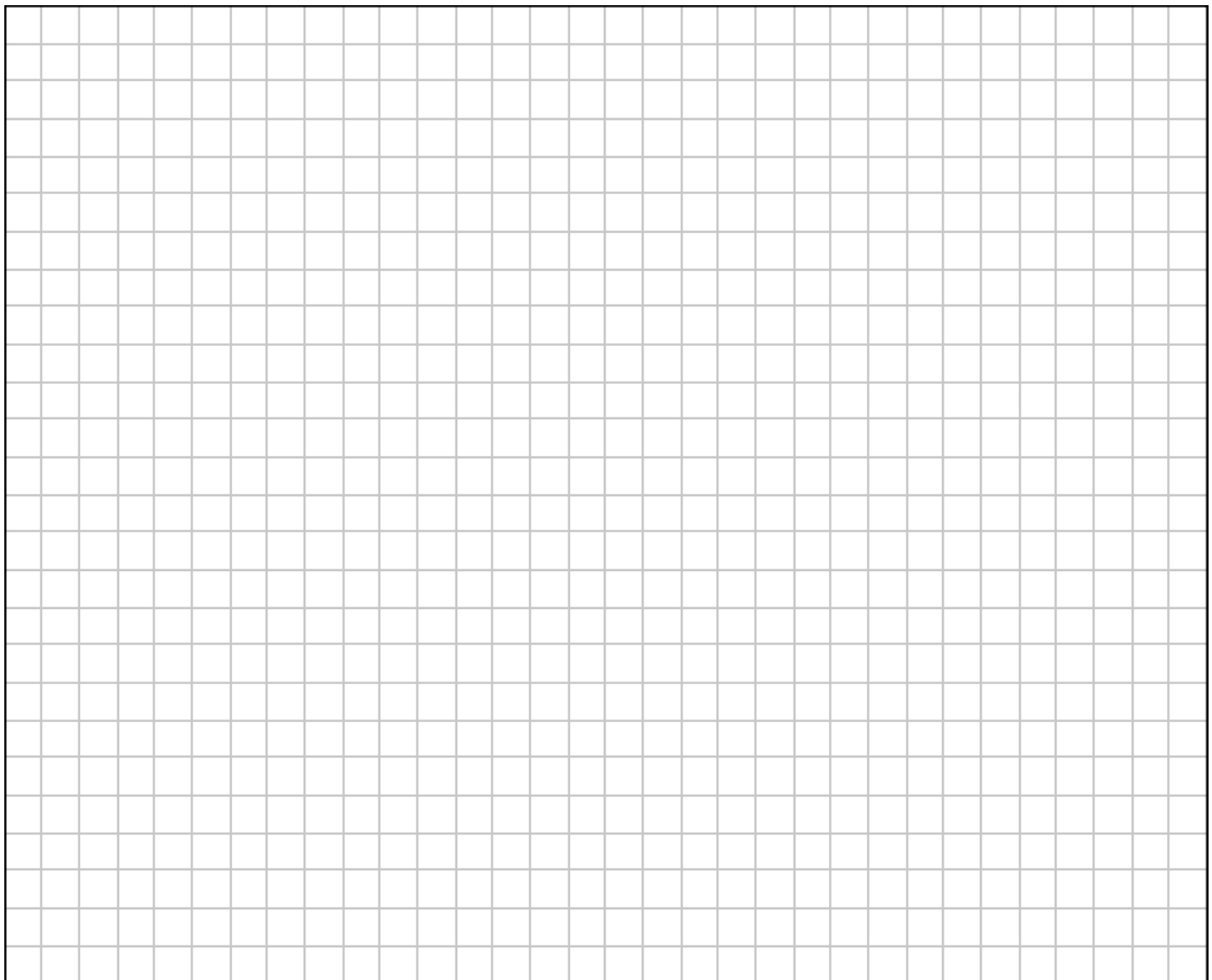
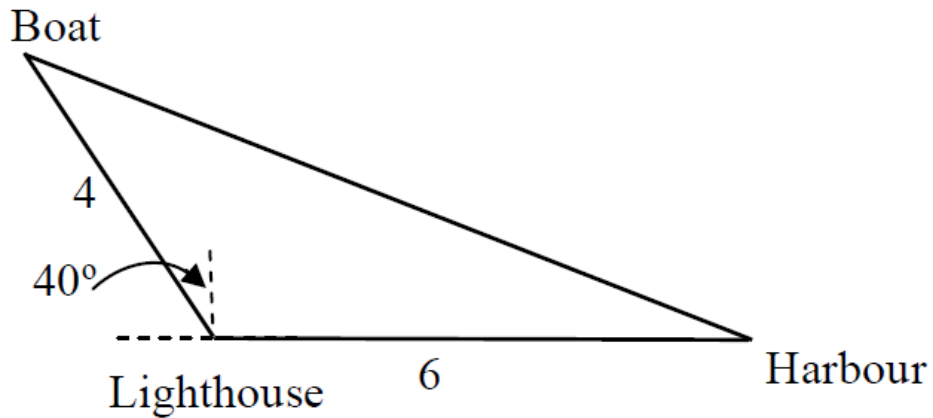
A harbour is 6 km due East of a lighthouse.

A boat is 4 km from the lighthouse.

The bearing of the boat from the lighthouse is $N 40^\circ W$.

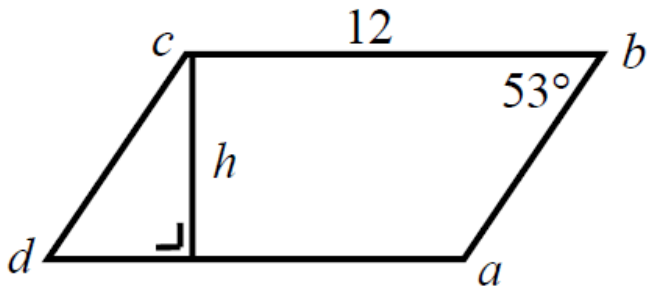
How far is the boat from the harbour?

Give your answer correct to one decimal place.



5 ► 2003 JCHL Paper 2 – Question 4 (a)

In the parallelogram $abcd$, $|\angle abc| = 53^\circ$ and $|bc| = 12$ cm.



(i) Find $|\angle bcd|$.

(ii) Find the perpendicular height, h , given that the area of $abcd$ is 90 cm^2 .