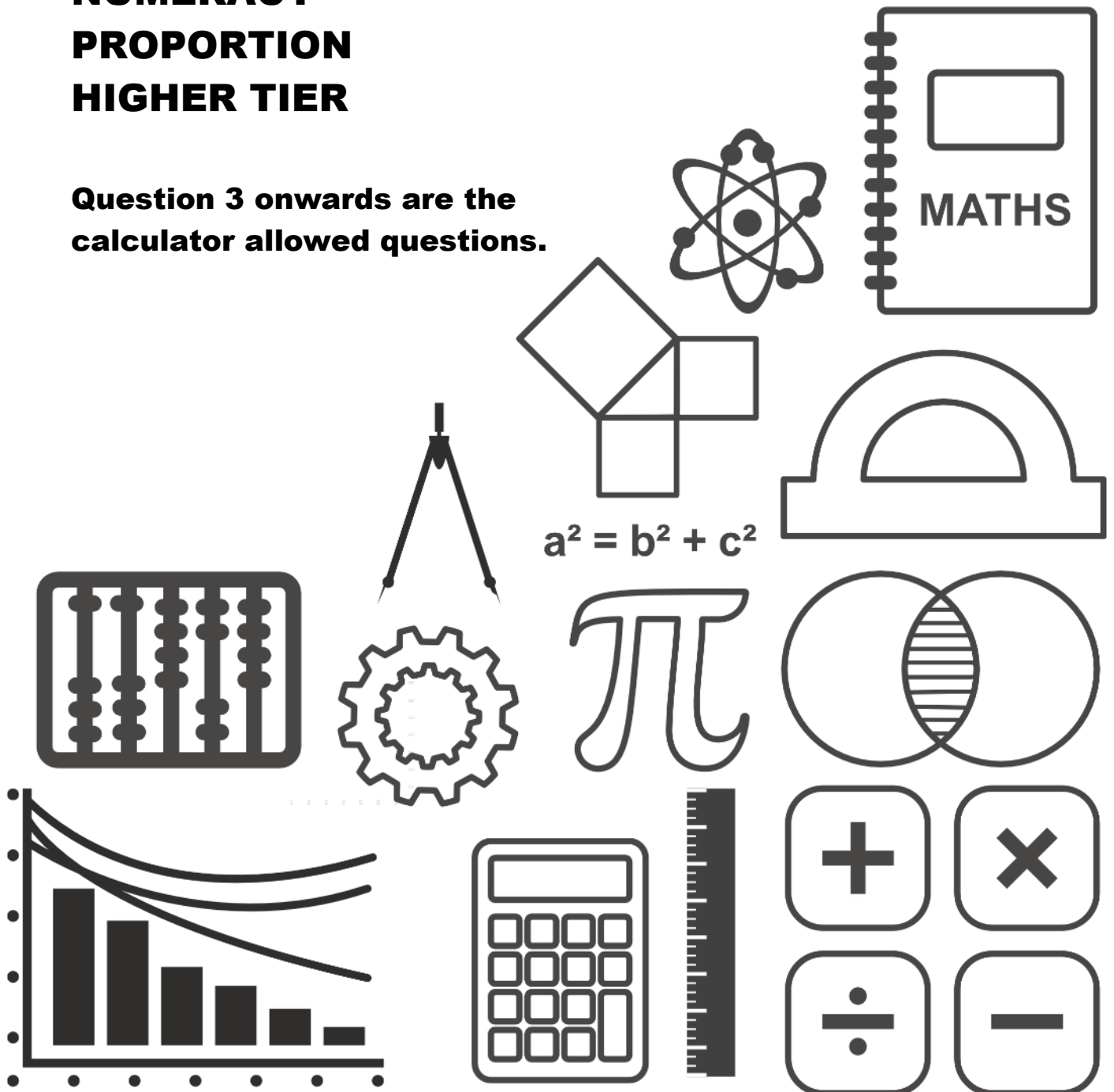


MATHSDIY

GCSE TOPIC BOOKLET NUMERACY PROPORTION HIGHER TIER

Question 3 onwards are the
calculator allowed questions.



1. On a building site, 4 bricklayers were able to lay 2000 bricks in 8 hours.

To complete the work on time, bricklayers will need to lay 9000 bricks in 10 hours.



(a) Calculate how many bricklayers would be needed to lay 9000 bricks in 10 hours. You must show all your working. [4]

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(b) Give one assumption that you made in answering part (a). [1]

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2. On a new housing estate, teams of painters paint the walls and ceilings of houses once they are built.

- (a) It takes a team of 5 painters 10 hours to paint a house that has a total wall and ceiling area of 500m^2 .

A new house on the estate has a total wall and ceiling area of 600m^2 .
This house has to be painted in 8 hours.

Calculate the least number of painters needed.
You must show all your working.

[4]

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- (b) What assumption have you made in answering part (a)? [1]

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3. Gary and Carys are fire officers.

Last week, they recorded that 5 engines were able to pump 26 000 gallons of water onto a fire in 3 minutes.



(a) Show that 9 engines would be able to pump 143 000 gallons of water in under 9 minutes 15 seconds.

[4]

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(b) Give one possible reason why the 9 engines **may not** be able to pump 143 000 gallons of water in under 9 minutes 15 seconds.

[1]

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