



Aberdare Community School
Mathematics Department

WJEC GCSE

Foundation – Non Calculator
Algebra

Conversion graphs

Name:

Set:

Date:

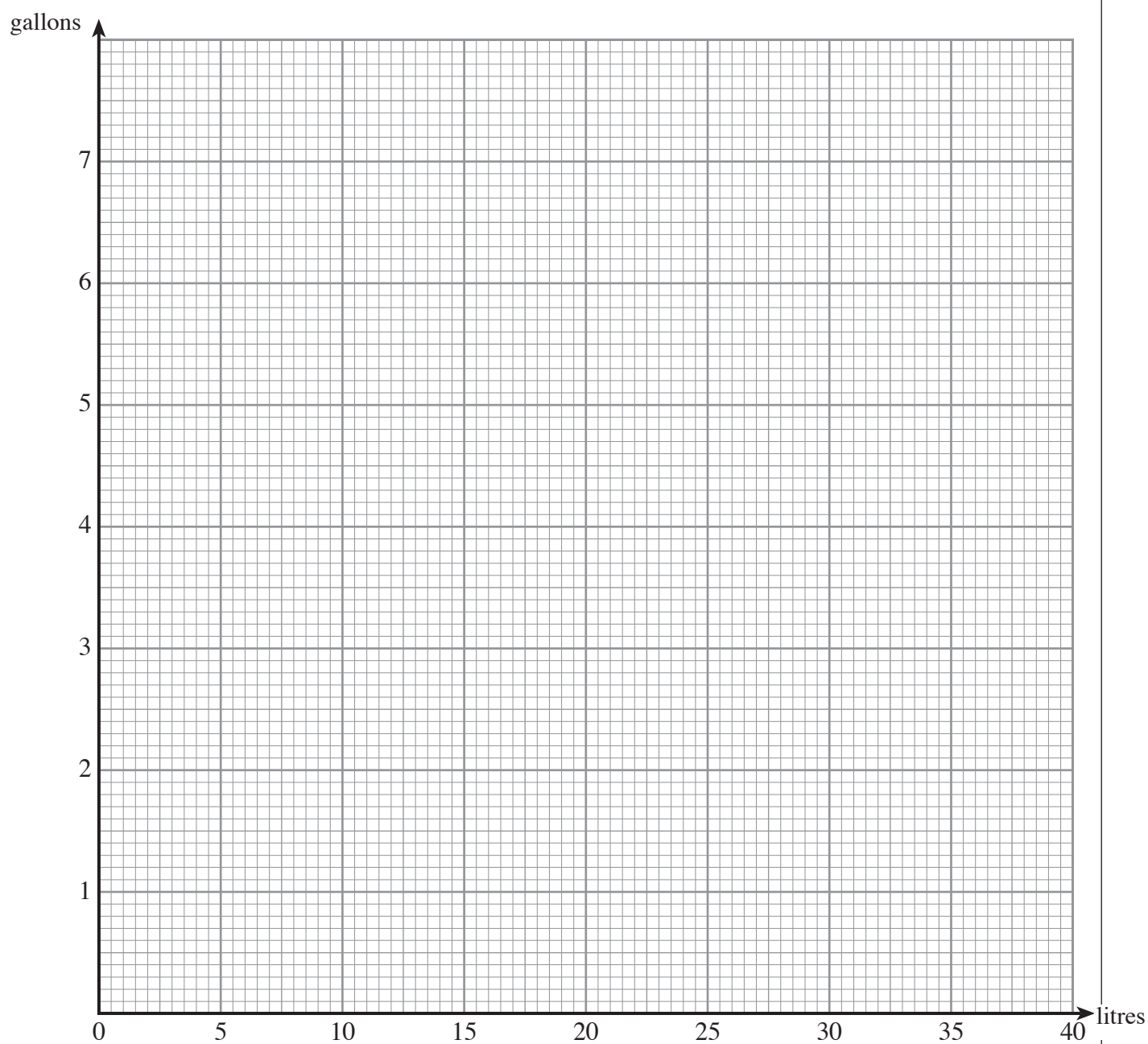
Teacher:

9. (a) The table shows the number of litres and the number of gallons in each of three volumes.

Litres	9	20	30
Gallons	2.0	4.4	6.6

Use the data in the table to draw a conversion graph between gallons and litres.

[2]



- (b) Use your graph to show how you can find an estimate for the number of litres in 30 gallons.

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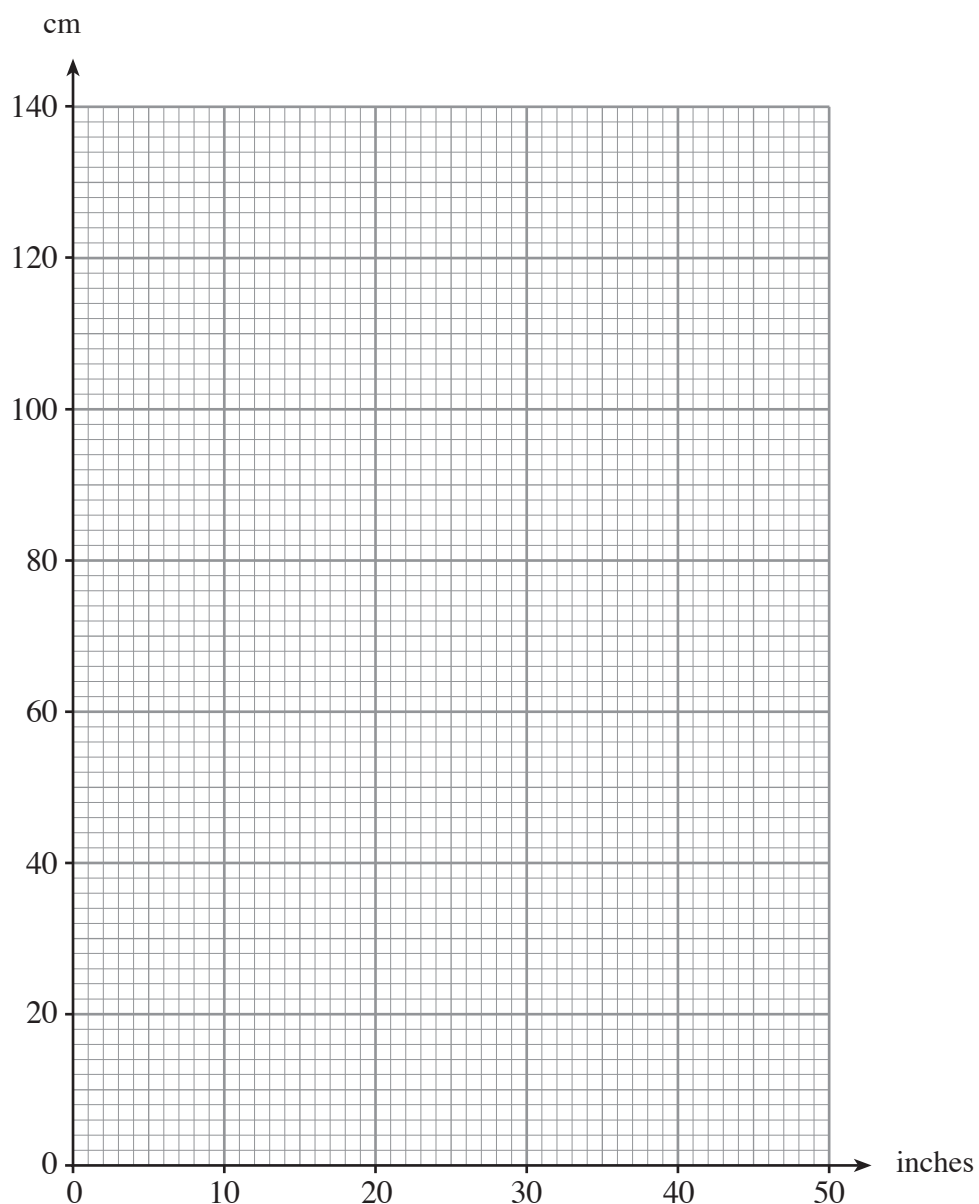
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8. (a) The table gives 3 lengths, both in inches and in centimetres.

inches	10	26	50
centimetres	25	66	127

Use the data in the table to draw a conversion graph between inches and centimetres.

[2]



- (b) Use your graph to find an estimate for 300 centimetres in inches.

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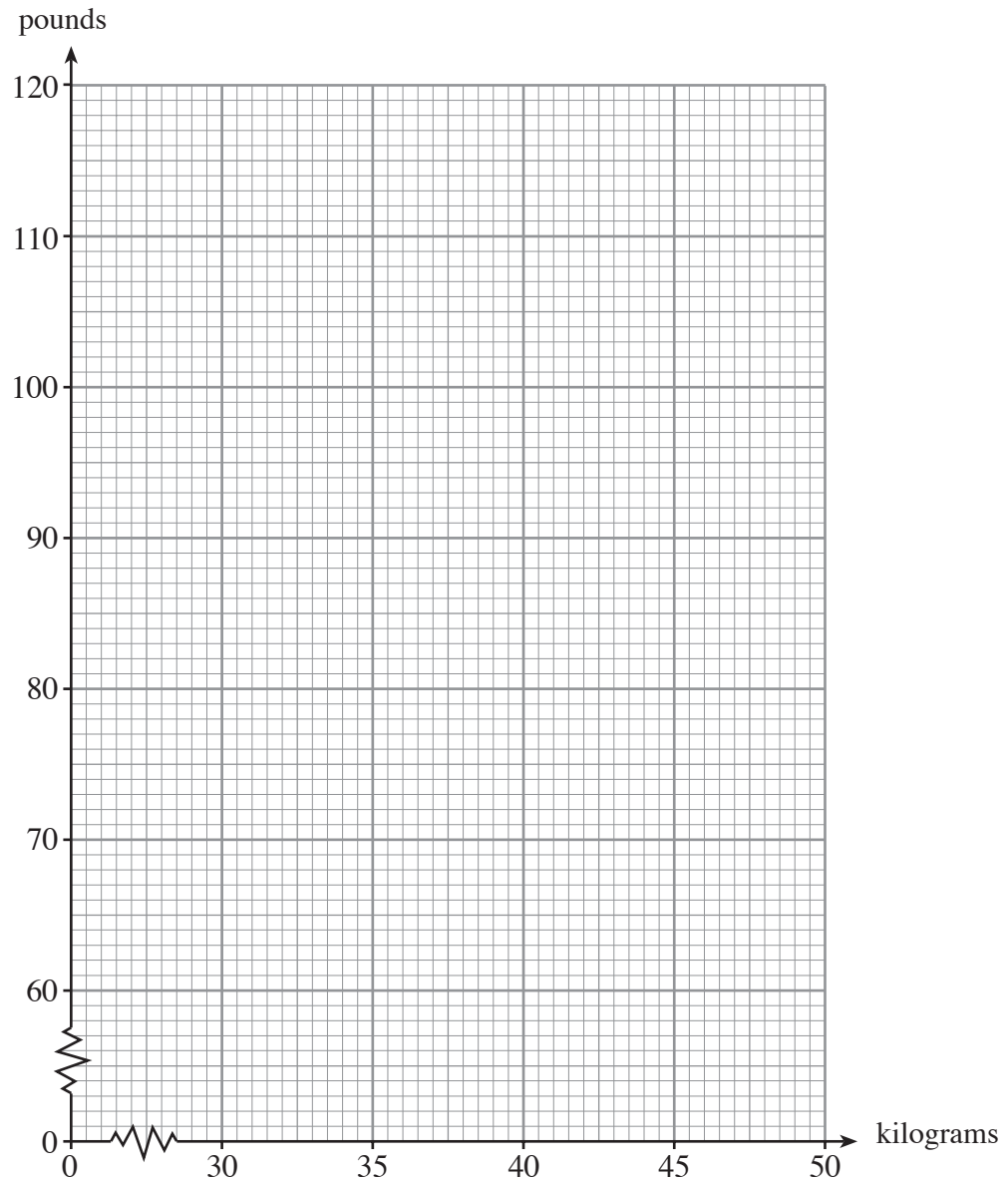
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[2]

9. (a) The table gives the masses of 3 people, both in pounds and in kilograms.

Kilograms	30	40	50
Pounds	66	88	110

Use the data in the table to draw a conversion graph between kilograms and pounds. [2]



- (b) Use your graph to find an estimate for the number of kilograms in 200 pounds.

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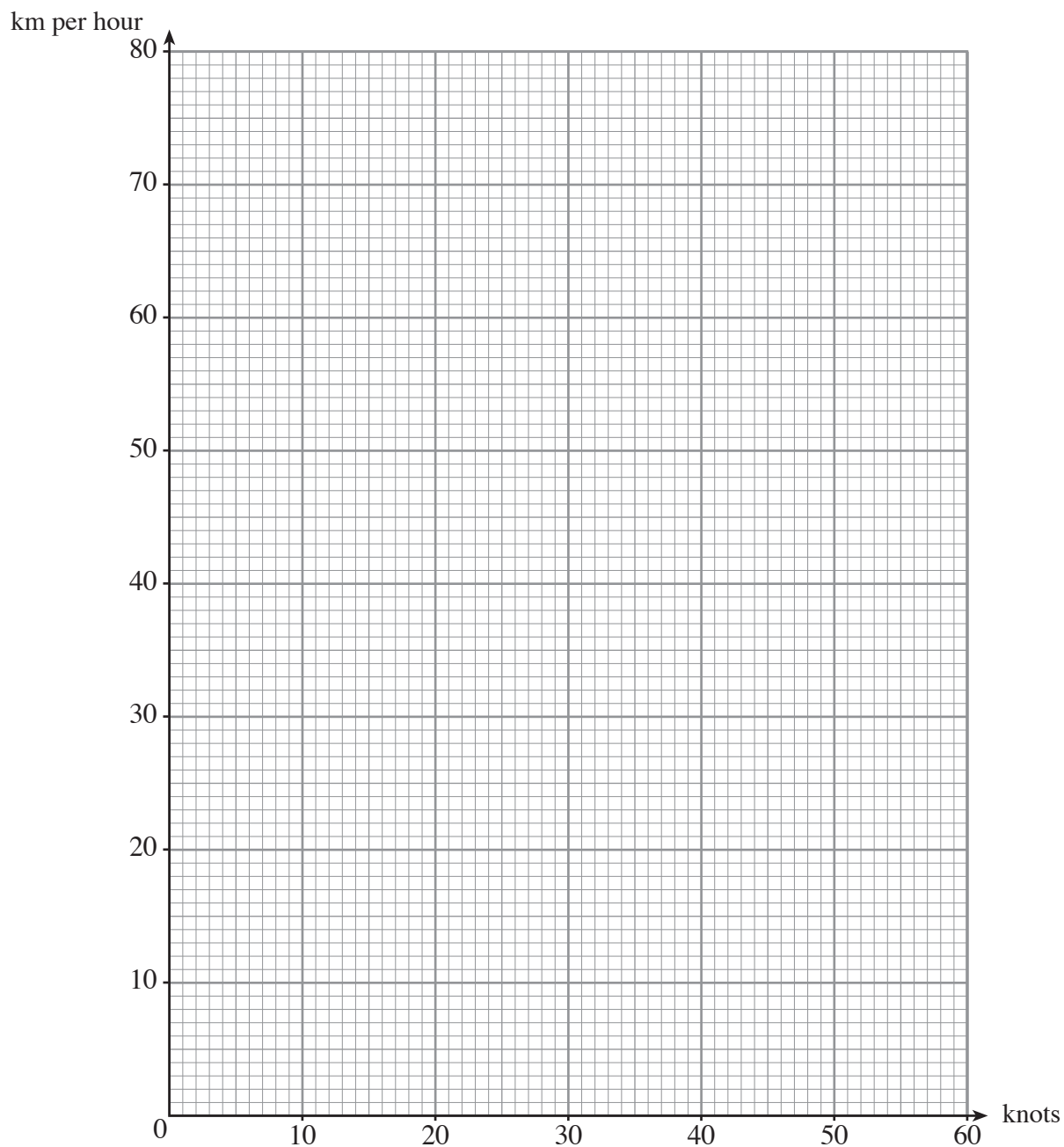
[2]

8. (a) The knot is a unit used to measure the speed of ships and aircraft. The table shows the number of knots and the number of km per hour for each of three speeds.

Knot	0	34	40
Km per hour	0	63	74

Use the data in the table to draw a conversion graph between km per hour and knots.

[2]



- (b) Find an estimate for 100 knots in km per hour.

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[2]

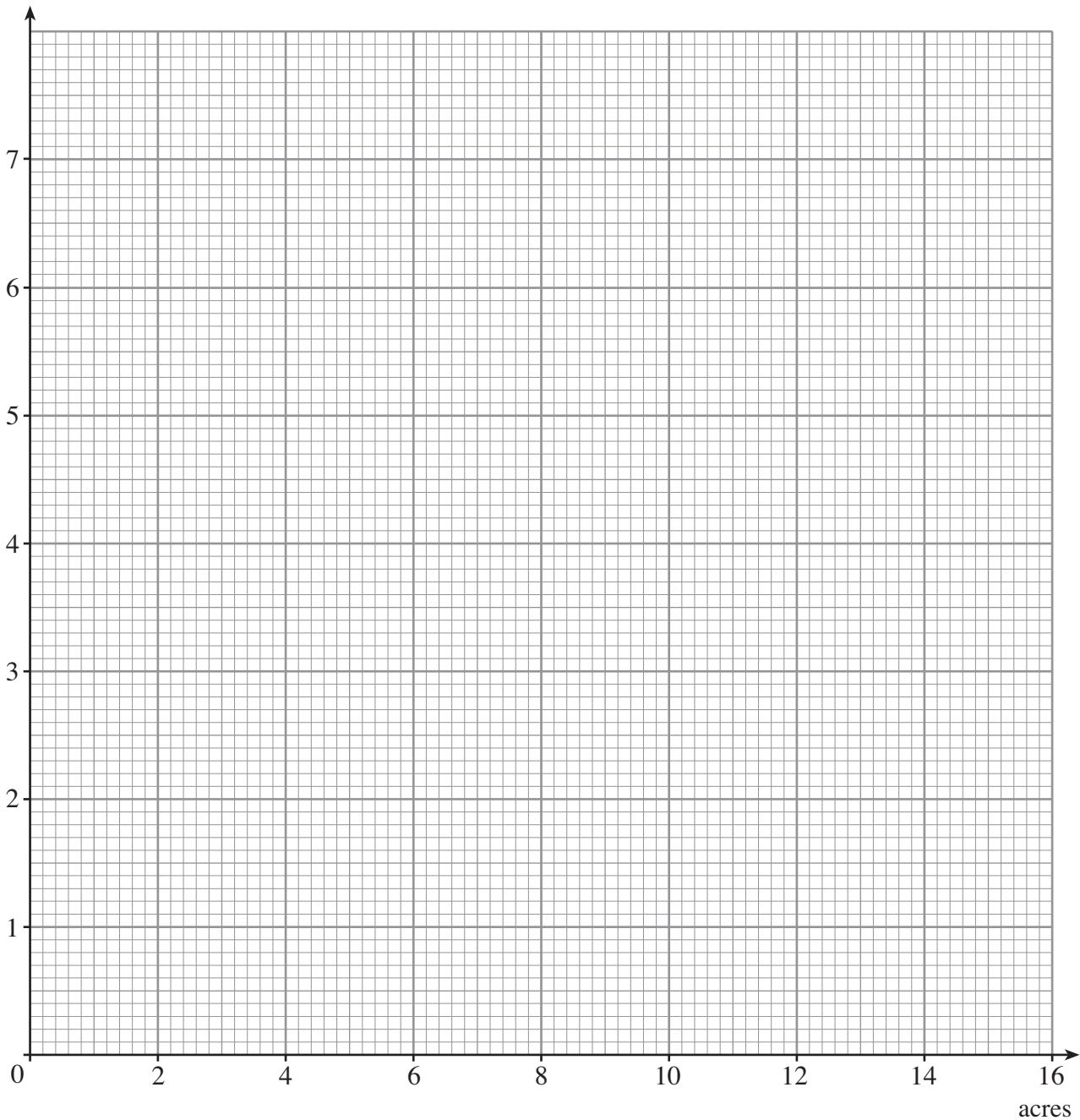
7. (a) A unit used in the imperial system for measuring the area of a field is the **acre**.
The unit used in the metric system is the **hectare**.
The table shows the number of acres and the number of hectares in each of three areas.

Acres	3	9	14
Hectares	1.2	3.6	5.6

Use the data in the table to draw a conversion graph between acres and hectares.

[2]

hectares



- (b) Find an estimate for the number of hectares in 200 acres.

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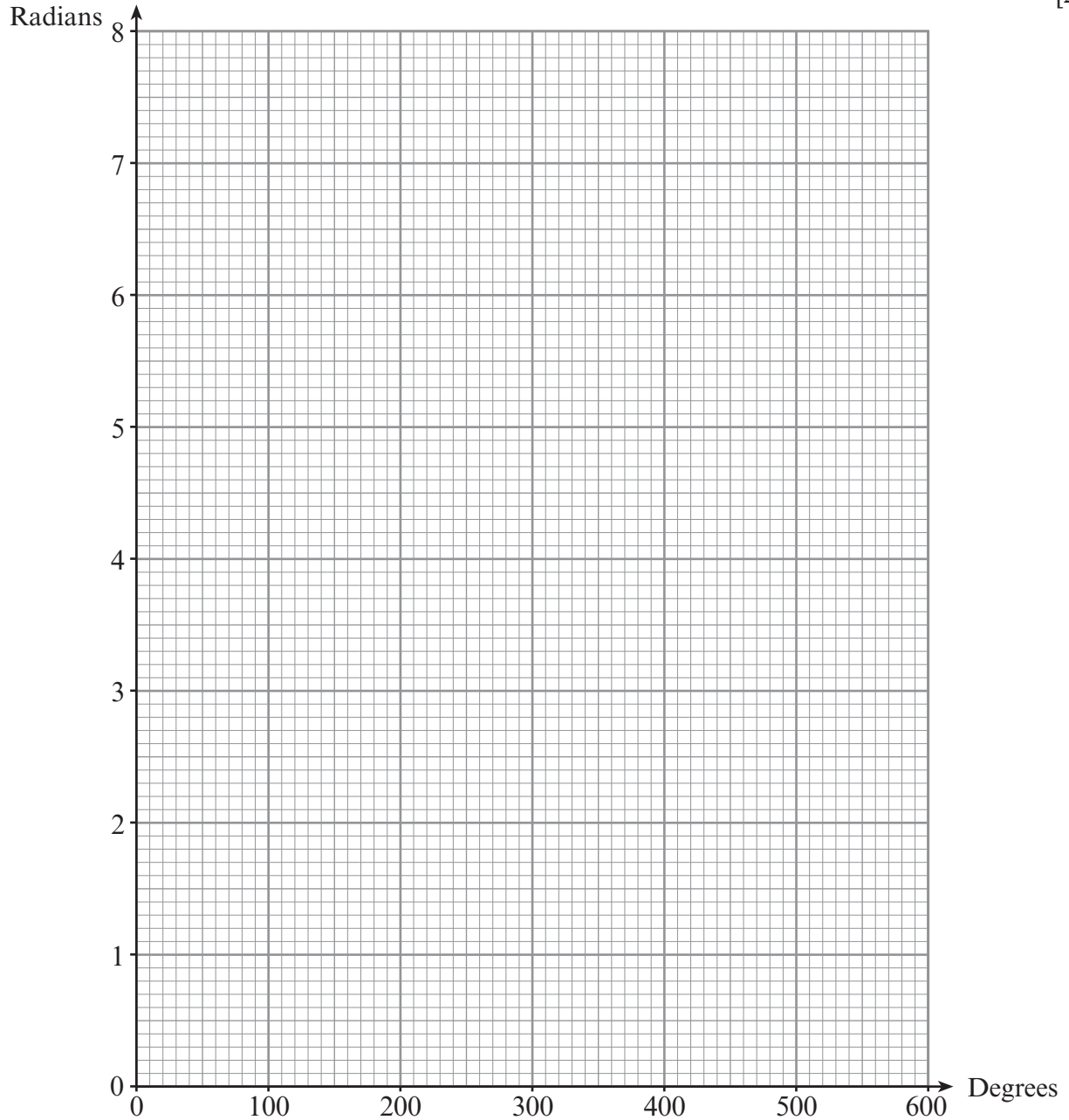
[2]

8. (a) The degree is a unit used to measure angles. Another unit used to measure angles is the radian. The table shows the number of degrees and the number of radians for each of three angles.

Degrees	80	240	430
Radians	1.4	4.2	7.5

Use the data in the table to draw a conversion graph between degrees and radians.

[2]



- (b) Find an estimate for 10 radians in degrees.

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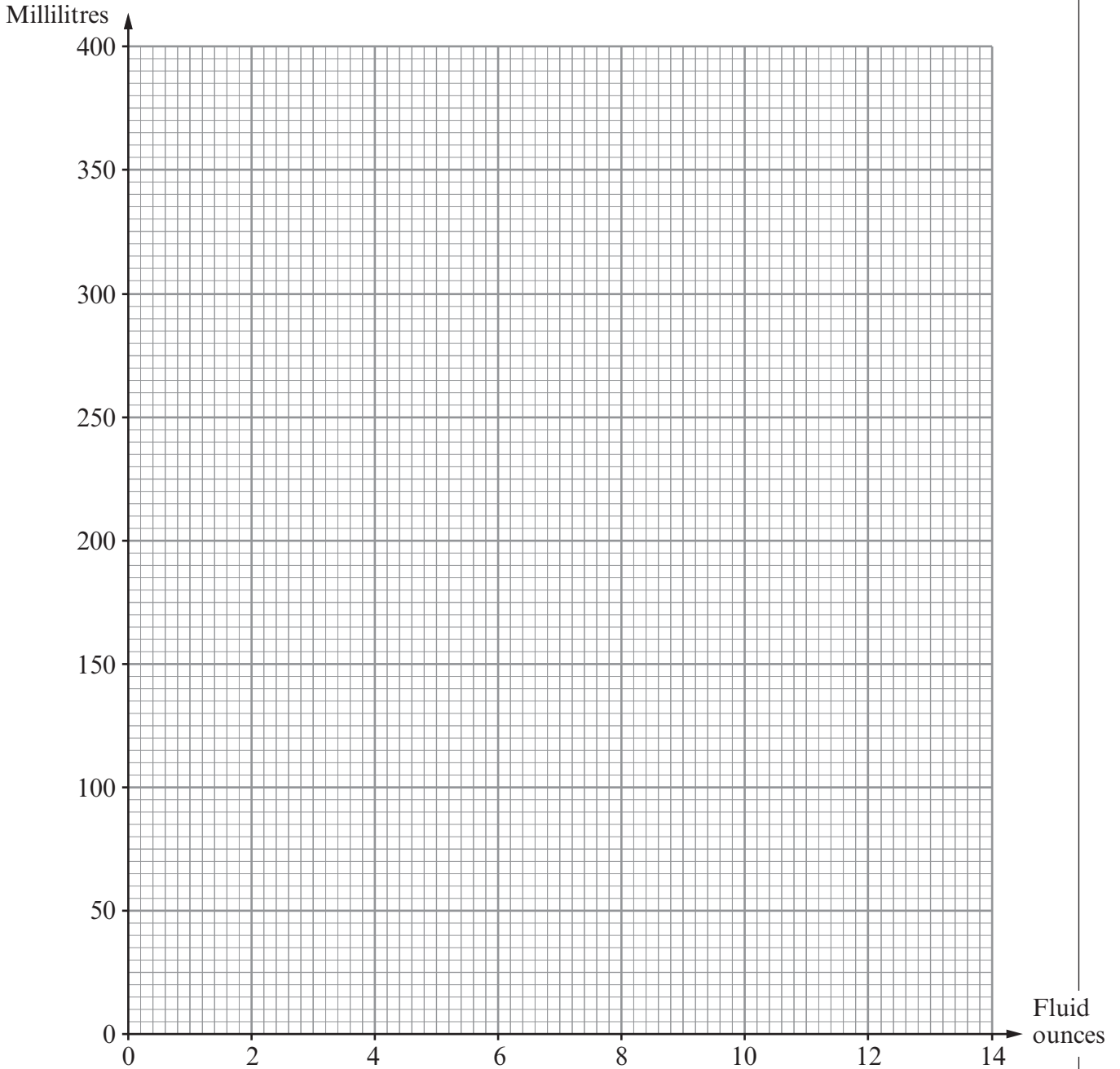
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[2]

8. (a) The **fluid ounce** is a unit of volume. A metric unit of volume is the **millilitre (ml)**. The table shows the number of fluid ounces and the number of millilitres in each of three volumes.

Fluid ounces	2	5	7
Millilitres	57	142	199

Use the data in the table to draw a conversion graph between fluid ounces and millilitres. [2]



- (b) Use your graph to show how you can find an estimate for the number of millilitres in 30 fluid ounces.

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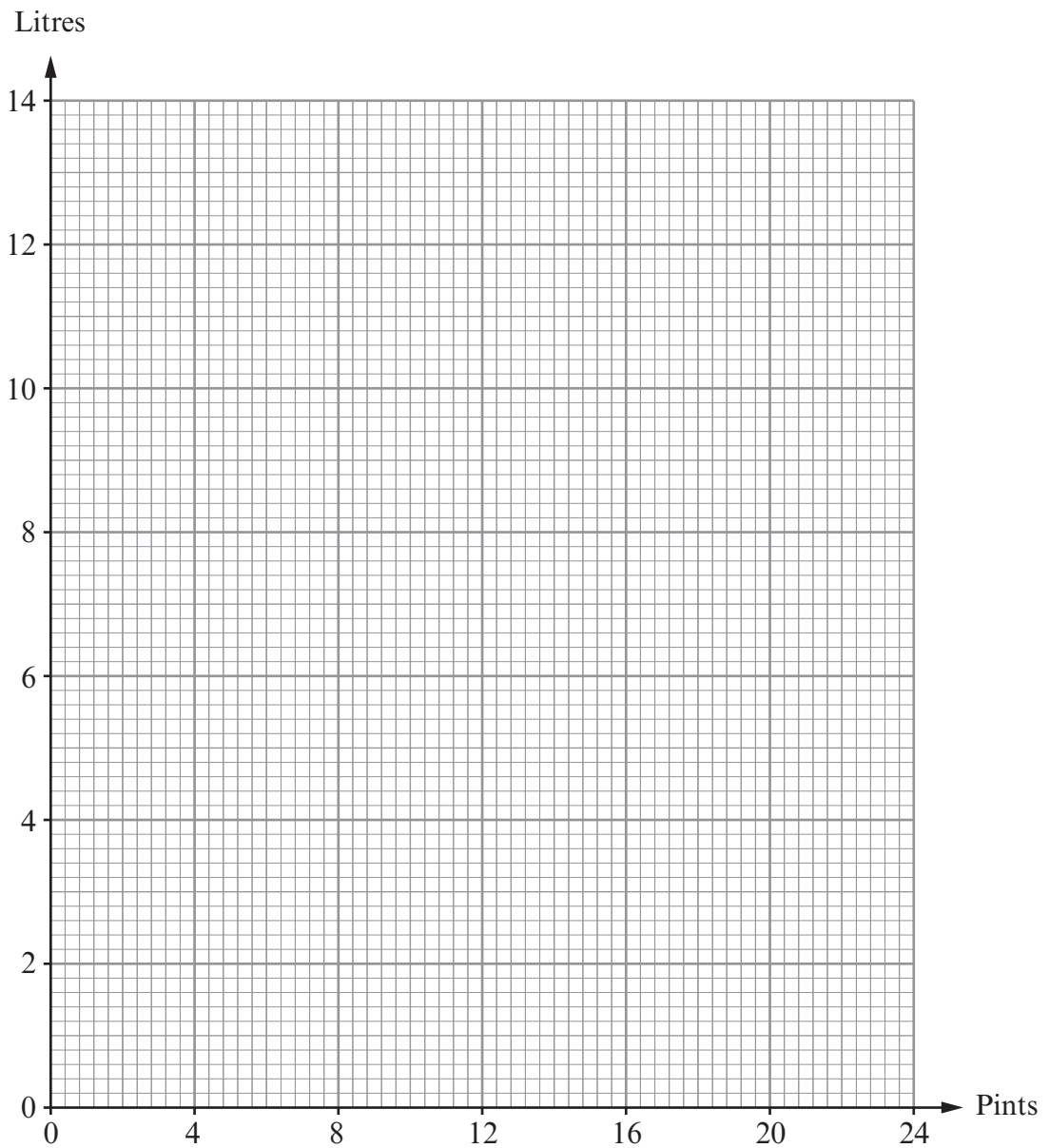
[2]

8. (a) The volume of liquid in a container can be measured in pints or in litres. The table shows the number of pints and the number of litres for each of three volumes.

Pints	7	14	21
Litres	4	8	12

Use the data in the table to draw a conversion graph between pints and litres.

[2]



- (b) Find an estimate for 45 litres in pints.

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[2]

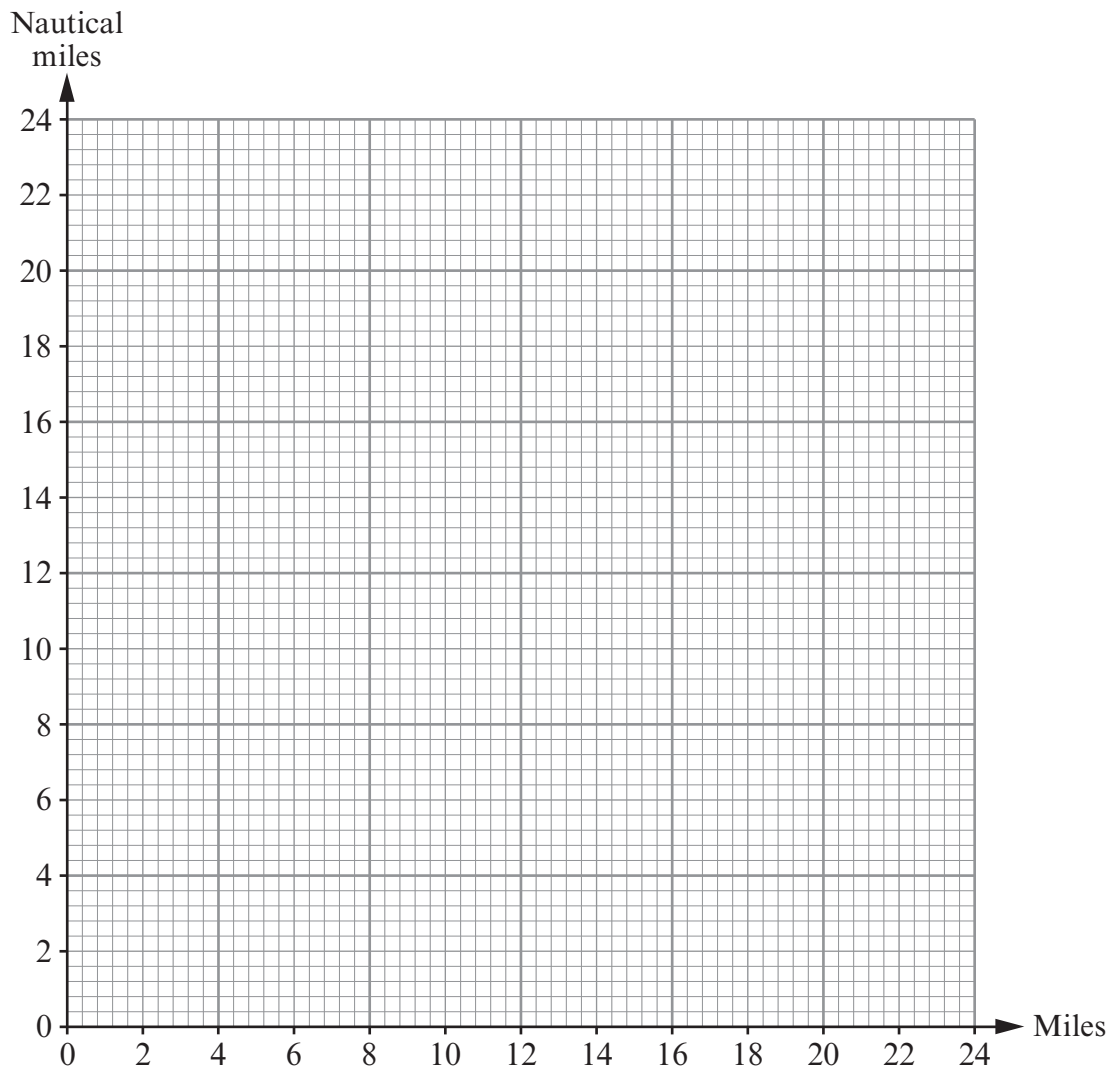


10. (a) At sea, the distance travelled by ships is measured in nautical miles rather than miles. The table shows the number of miles and the number of nautical miles for each of three distances.

Miles	8	16	23
Nautical miles	7	14	20

Use the data in the table to draw a conversion graph between miles and nautical miles.

[2]



- (b) Find an estimate, in miles, for 50 nautical miles.

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[2]



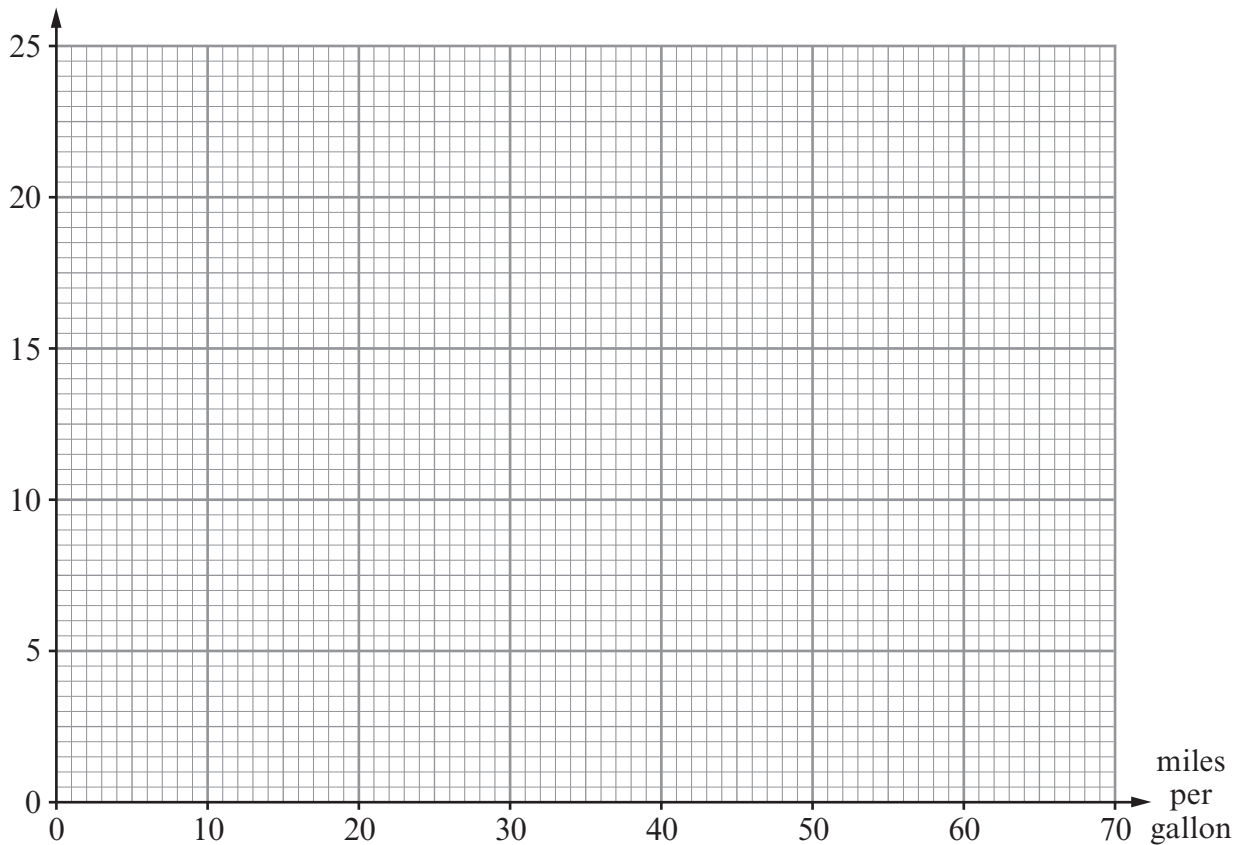
8. (a) The fuel consumption of vehicles can be measured in miles per gallon or in kilometres per litre.
The table shows 3 different values for the consumption in miles per gallon and the corresponding 3 values in kilometres per litre.

Miles per gallon	13	35	60
Kilometres per litre	4.6	12.4	21.2

Use the data in the table to draw a conversion graph between miles per gallon and kilometres per litre.

[2]

km per litre



- (b) Find an estimate, in miles per gallon, for 40 kilometres per litre.

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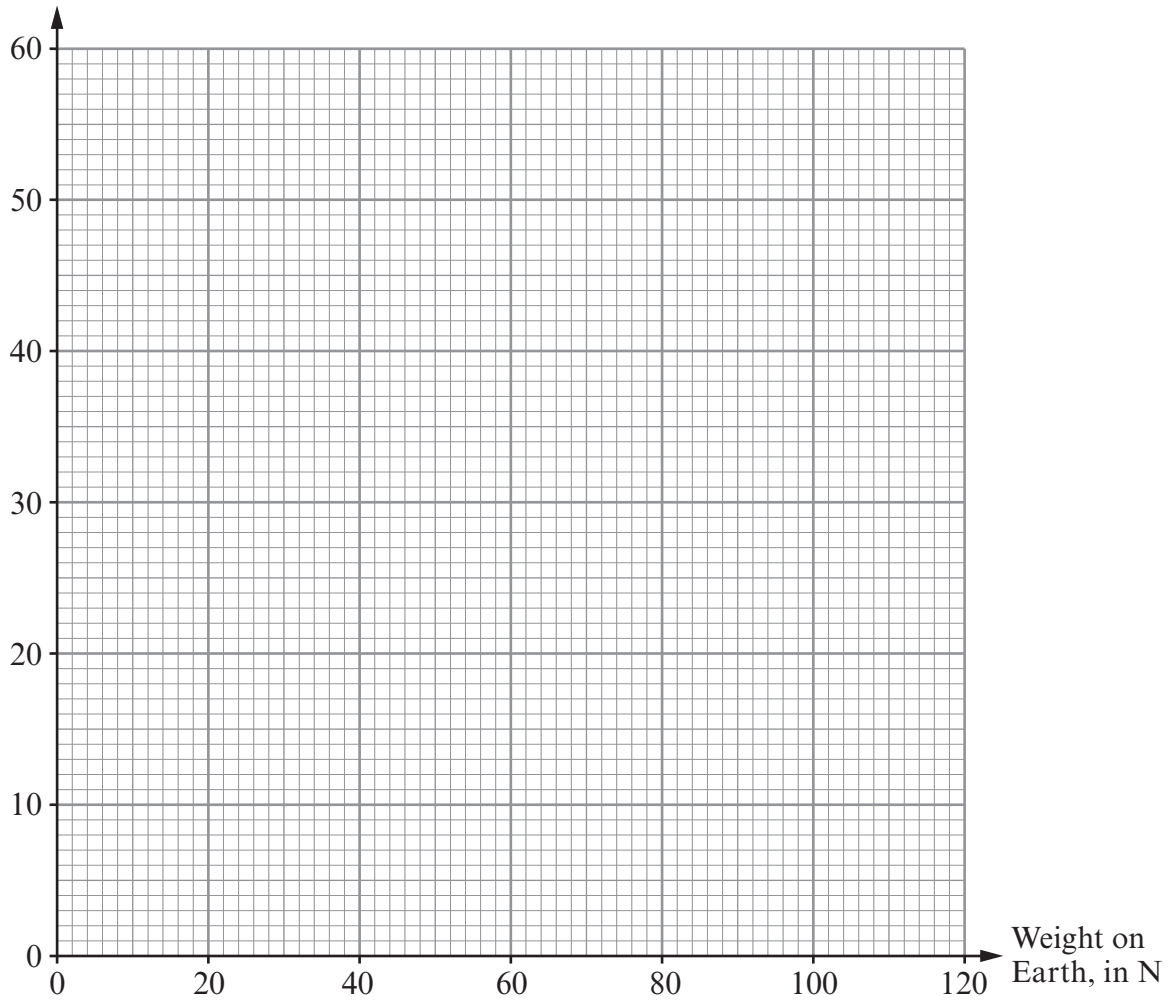
[2]

10. (a) The weight of an object on the planet Mars is different from the object's weight on Earth. The table shows the weight in newtons (N) of three different objects on Earth and on Mars.

Weight on Earth (N)	114	85	24
Weight on Mars (N)	43	32	9

Use the data in the table to draw a conversion graph between weights on Earth and weights on Mars.

Weight on Mars, in N



[2]

- (b) A rock weighs 370 N on Mars.
Find an estimate for the weight of this rock on Earth.

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[2]

