



ACHIEVE ACADEMY

GCSE Maths — Higher Tier

Compound Measures · Practice Booklet

NAME: _____

CLASS: _____

DATE: _____

☐ Developing

☐ Secure

☐ Greater Depth

Answer every question in the working space provided. Method marks are available for correct working even if the final answer is wrong. Check the time allowed with your tutor before you start.

Compound Measures

Total marks available: 104

● Compound Measures

Q1

[4 marks]

A car travels 355 km in 5 hours, then a further 41 km in 1 hour. Find its average speed for the whole journey.

Q2

[4 marks]

A car travels 63 km in 1 hour, then a further 132 km in 2 hours. Find its average speed for the whole journey.

Q3

[4 marks]

A car travels 48 km in 2 hours, then a further 84 km in 4 hours. Find its average speed for the whole journey.

Q4

[4 marks]

A car travels 414 km in 6 hours, then a further 290 km in 5 hours. Find its average speed for the whole journey.

Q5

[4 marks]

A car travels 360 km in 5 hours, then a further 350 km in 5 hours. Find its average speed for the whole journey.

Q6

[4 marks]

A car travels 98 km in 2 hours, then a further 294 km in 6 hours. Find its average speed for the whole journey.

Q7

[3 marks]

A force of 182 N acts over an area, producing a pressure of 14 N/m^2 . Find the area.

Q8

[3 marks]

A force acts over an area of 7 m^2 producing a pressure of 18 N/m^2 . Find the force.

Q9

[3 marks]

A force of 120 N acts over an area, producing a pressure of 8 N/m^2 . Find the area.

Q10

[4 marks]

A car travels 304 km in 4 hours, then a further 146 km in 2 hours. Find its average speed for the whole journey.

Q11

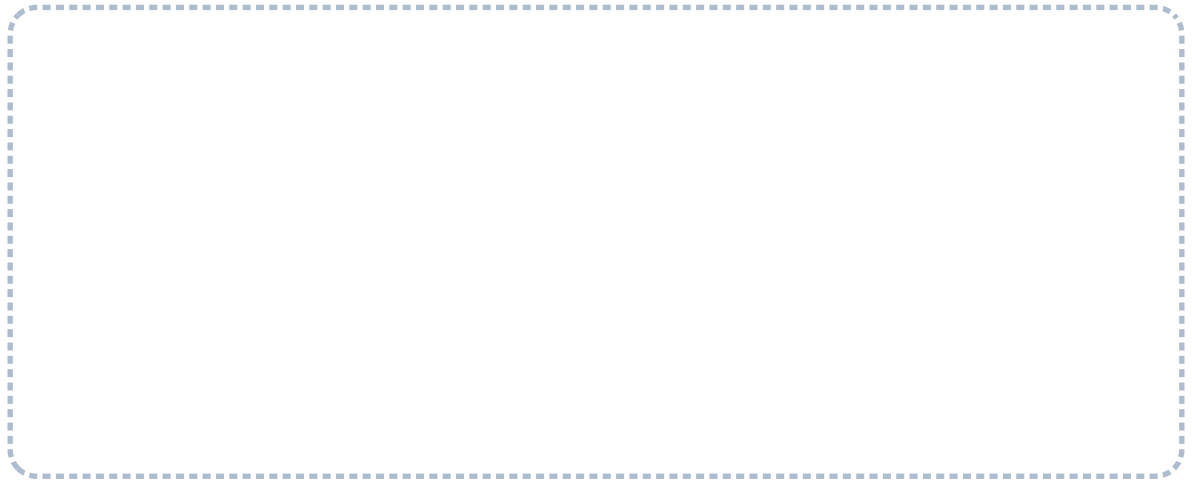
[3 marks]

A car travels at 666.0 km/h. Find this speed in m/s, to 2 decimal places.

Q12

[3 marks]

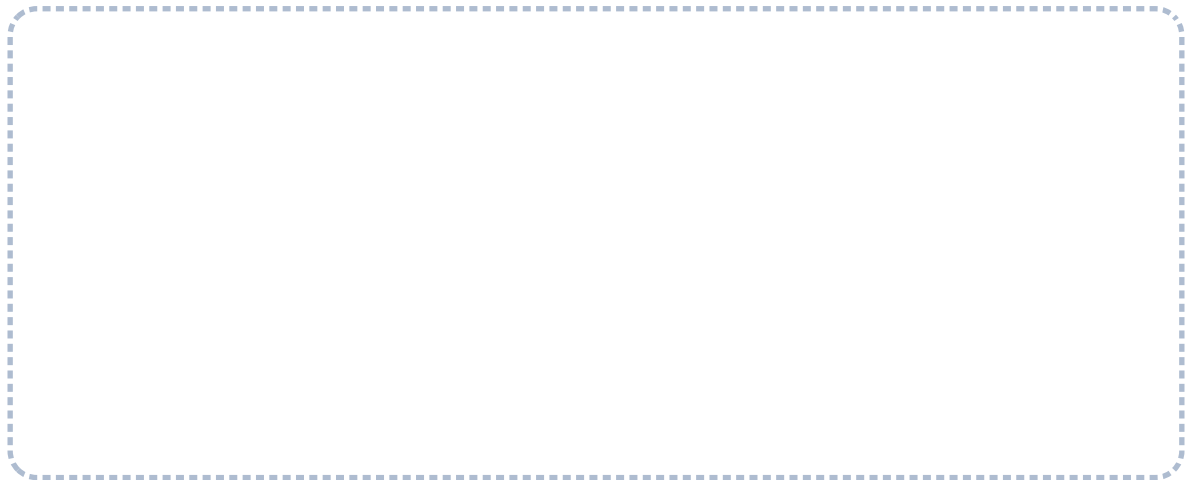
A car travels at 489.6 km/h. Find this speed in m/s, to 2 decimal places.



Q13

[3 marks]

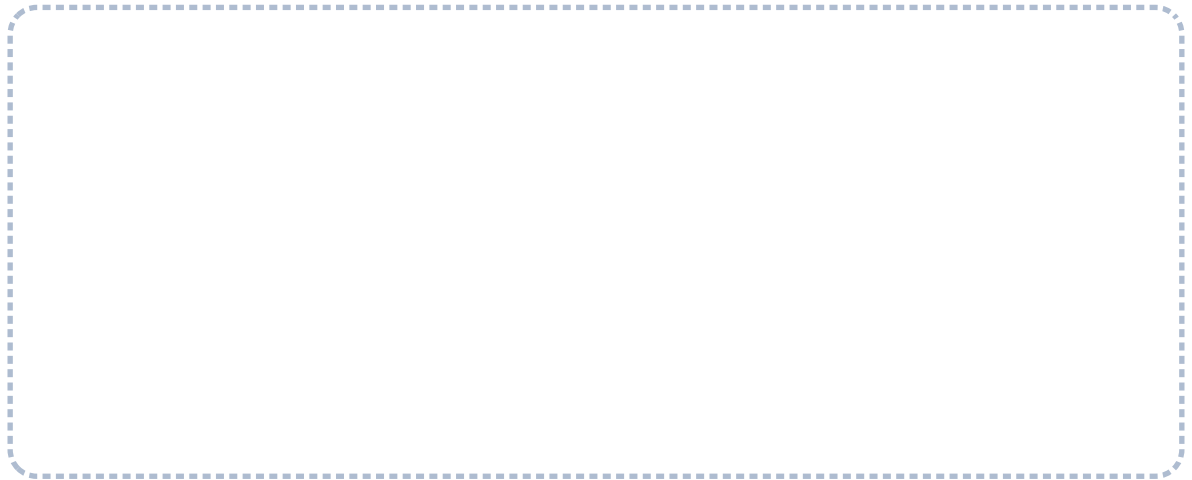
A car travels at 356.4 km/h. Find this speed in m/s, to 2 decimal places.



Q14

[3 marks]

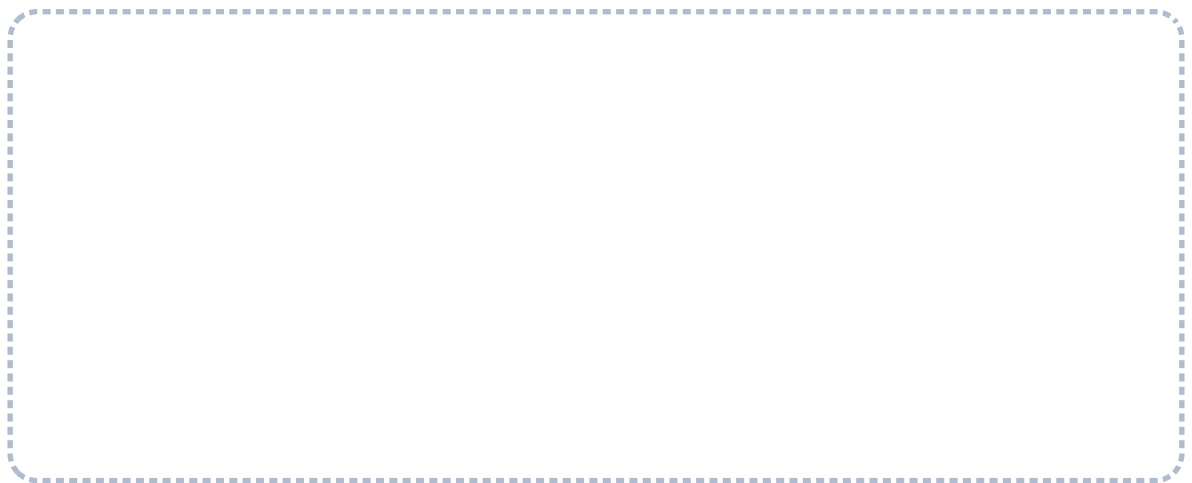
A car travels at 540.0 km/h. Find this speed in m/s, to 2 decimal places.



Q15

[3 marks]

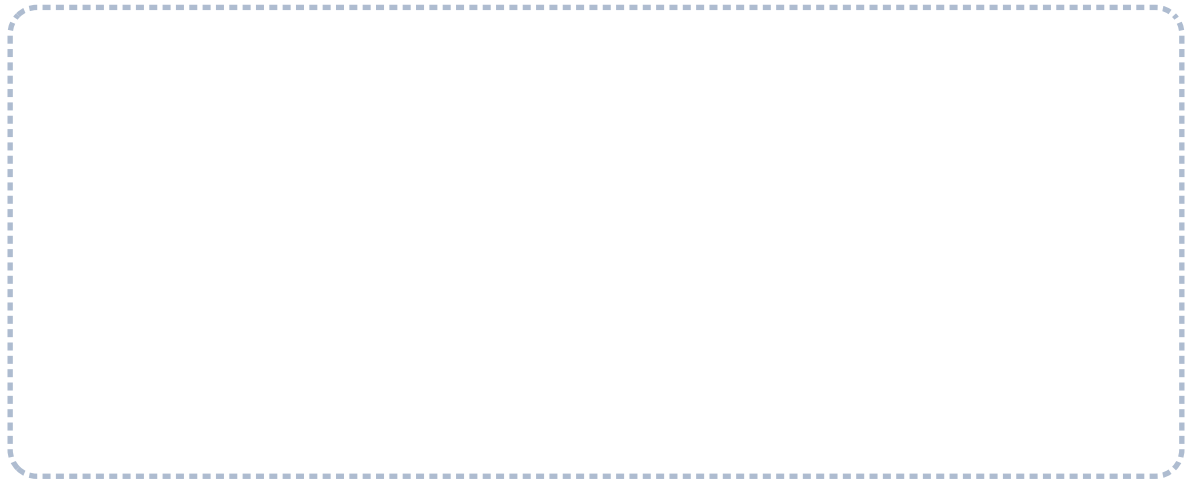
A car travels at 338.4 km/h. Find this speed in m/s, to 2 decimal places.



Q16

[3 marks]

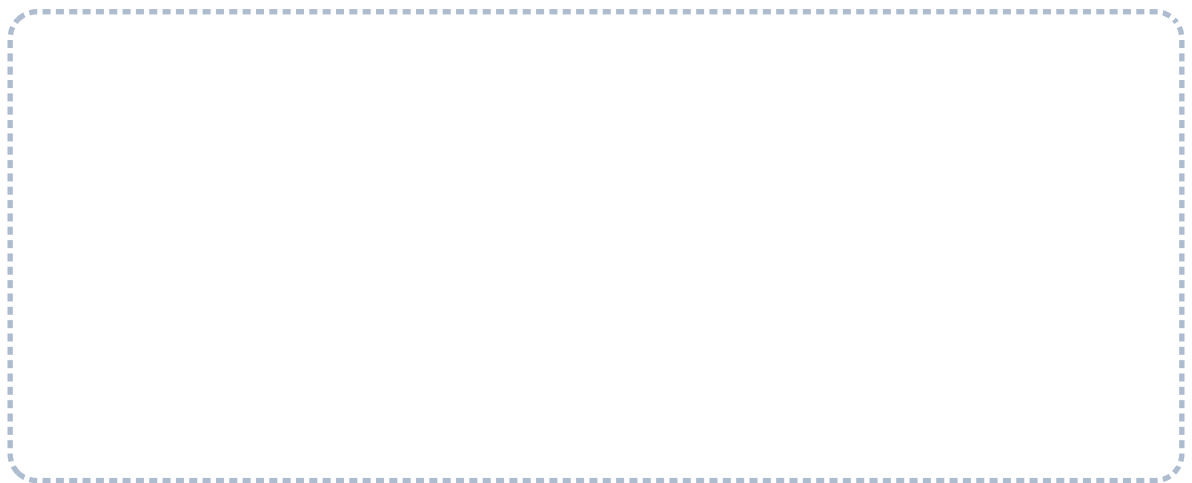
A car travels at 860.4 km/h. Find this speed in m/s, to 2 decimal places.



Q17

[3 marks]

A car travels at 302.4 km/h. Find this speed in m/s, to 2 decimal places.



Q18

[4 marks]

8cm^3 of metal A (mass 16g) is mixed with 6cm^3 of metal B (mass 12g). Find the density of the mixture.

Q19

[3 marks]

A car travels at 799.2 km/h . Find this speed in m/s , to 2 decimal places.

Q20

[3 marks]

A car travels at 784.8 km/h. Find this speed in m/s, to 2 decimal places.

Q21

[4 marks]

A journey of 47 km is made in two parts. The first part is travelled at 3 km/h and the second part at 2 km/h. The whole journey takes 19 hours. If the first part is 27 km, find the length of the second part and confirm the total time.

Q22

[3 marks]

A force of 84.6 N acts over an area of 9 m². Find the pressure, in N/m², giving your answer to 1 decimal place.

Q23

[3 marks]

A force of 11.6 N acts over an area of 2 m². Find the pressure, in N/m², giving your answer to 1 decimal place.

Q24

[4 marks]

A journey of 60 km is made in two parts. The first part is travelled at 2 km/h and the second part at 6 km/h. The whole journey takes 18 hours. If the first part is 24 km, find the length of the second part and confirm the total time.

Q25

[4 marks]

A journey of 99 km is made in two parts. The first part is travelled at 4 km/h and the second part at 5 km/h. The whole journey takes 22 hours. If the first part is 44 km, find the length of the second part and confirm the total time.

Q26

[4 marks]

A journey of 30 km is made in two parts. The first part is travelled at 5 km/h and the second part at 2 km/h. The whole journey takes 9 hours. If the first part is 20 km, find the length of the second part and confirm the total time.

Q27

[4 marks]

A journey of 50 km is made in two parts. The first part is travelled at 4 km/h and the second part at 2 km/h. The whole journey takes 15 hours. If the first part is 40 km, find the length of the second part and confirm the total time.

Q28

[3 marks]

A force of 12.0 N acts over an area of 2 m². Find the pressure, in N/m², giving your answer to 1 decimal place.

Q29

[3 marks]

A force of 6.6 N acts over an area of 2 m². Find the pressure, in N/m², giving your answer to 1 decimal place.

Q30

[4 marks]

A journey of 70 km is made in two parts. The first part is travelled at 4 km/h and the second part at 6 km/h. The whole journey takes 14 hours. If the first part is 28 km, find the length of the second part and confirm the total time.