1. Question | 0607 Feb-March 2025 P4 V2 Q2

2 $\$Y$ is shared in the ratio 5 : 2.
The difference between the two shares is \$108.

Work out the value of Y.

$Y =$ ..... [2]

2. Question | 0607 Feb-March 2025 P4 V2 Q3

3 Work out $5\frac{1}{6} \times \frac{24}{27}$.

Give your answer as a mixed number.

..... [1]

3. Question | 0607 Feb-March 2025 P4 V2 Q5

5 Work out $\sqrt{25 - 7^{0.3} \times 1.5}$.

..... [1]

4. Question | 0607 Feb-March 2025 P4 V2 Q7

7 Write $7\,230\,000\,000$ in standard form.

..... [1]

5. Question | 0607 Feb-March 2025 P4 V2 Q11

11 Vikram invests $450 at a rate of 3.1% per year compound interest.

Calculate the number of complete years that it takes for the value of Vikram's investment to first be greater than $900.

..... [4]

6. Question | 0607 Feb-March 2025 P4 V2 Q12

12 A container is in the shape of a cuboid.
The cuboid measures 41 cm by 32 cm by 25 cm.

(a) Show that the capacity of the container is 32.8 litres.

[2]

(b) At 10 40 the container is empty.
Water flows into the container at a rate of 2 litres per hour until the container is full.

(i) At 12 10 there are x litres of water in the container.

Find x as a percentage of 32.8 .

..... % [3]

(ii) Find the time when the container is full.

..... [3]

7. Question | 0607 May-June 2025 P4 V1 Q2

2 **(a)** Find 42 as a percentage of 60.

..... % [1]

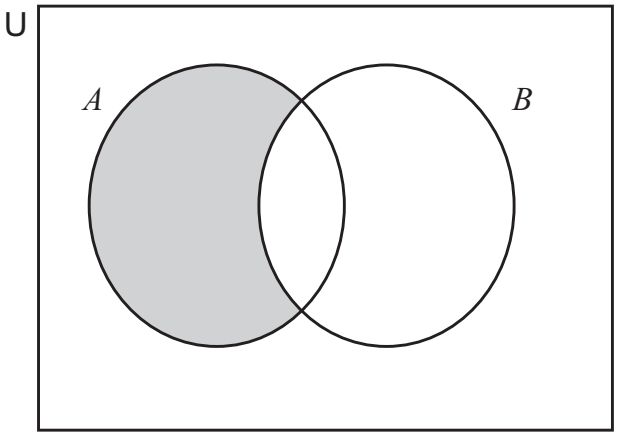
(b) Aisha's rate of pay is $17.50 per hour.
She receives a pay rise of 8%.

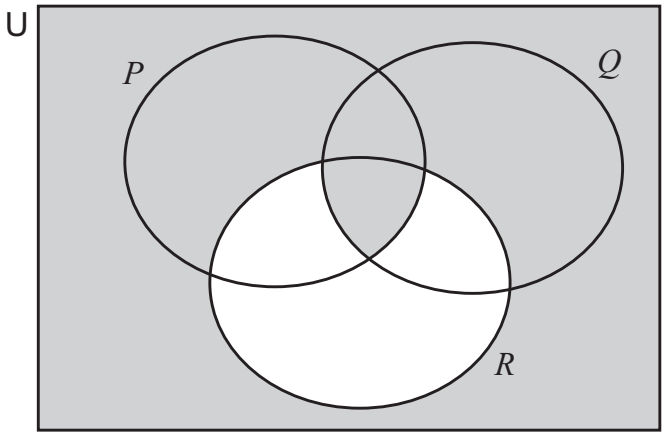
Calculate Aisha's new rate of pay per hour.

$ ..... [2]

8. Question | 0607 May-June 2025 P4 V1 Q4

4 Use set notation to describe each of the shaded regions.





.... [2]

9. Question | 0607 May-June 2025 P4 V1 Q9

9 The value of a car depreciates exponentially by 15% each year.
On 1 January 2023 its value was $20 400.

(a) Find the value of the car on

(i) 1 January 2022

$ ..... [2]

(ii) 1 January 2025.

$ ..... [2]

(b) Find the year in which the value of the car on 1 January will first be less than $5000.

..... [4]

10. Question | 0607 May-June 2025 P4 V2 Q1

1 Write the number 13 205.172 68

(a) correct to 3 significant figures

..... [1]

(b) correct to the nearest 10.

..... [1]

11. Question | 0607 May-June 2025 P4 V2 Q3

3 Work out.

$$(1.7)^2 - \sqrt{8.5}$$

..... [1]

12. Question | 0607 May-June 2025 P4 V2 Q4

4 Work out.

$$\frac{7}{12} - \frac{1}{3}$$

..... [1]

13. Question | 0607 May-June 2025 P4 V2 Q5

5 The exchange rate between pounds (£) and Chinese yuan (¥) is £1 = ¥8.3 .

Change £549 to Chinese yuan.

¥ ..... [1]

14. Question | 0607 May-June 2025 P4 V2 Q8

8 Xiong flies by plane from Manchester to Hong Kong.
The distance from Manchester to Hong Kong is 9000 km.
The flight takes 12.5 hours.

(a) Calculate the average speed of the plane.

..... km/h [1]

(b) The plane leaves Manchester at 2045.
The local time in Hong Kong is 8 hours ahead of the local time in Manchester.

Find the local time in Hong Kong when the plane lands.

..... [2]

15. Question | 0607 May-June 2025 P4 V2 Q12

12 Paula bought a house on 1 January 2023.
On 1 January 2024 the value of the house increased by 10%.
On 1 January 2025 the value of the house increased by 6% of its value on 1 January 2024.

The value of the house on 1 January 2025 was $215 710.

(a) Calculate the amount Paula paid for the house in 2023.

$ ..... [3]

(b) From 2025 the value of the house increases exponentially at the rate of 6% each year.
The value of the house on 1 January 2025 was $215 710.

Find the year in which the value of the house on 1 January will first be greater than $400 000.

..... [4]

16. Question | 0607 May-June 2025 P4 V3 Q3

3 Calculate.

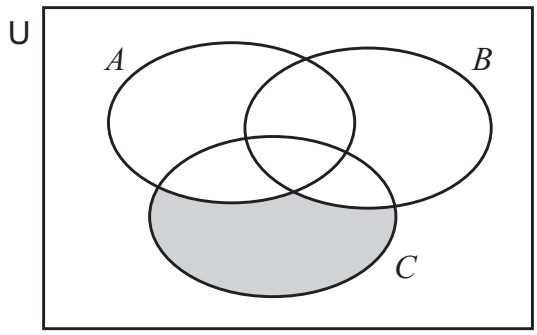
$$\sqrt[3]{1-\frac{2.7}{3.5}}$$

Give your answer correct to 4 significant figures.

..... [2]

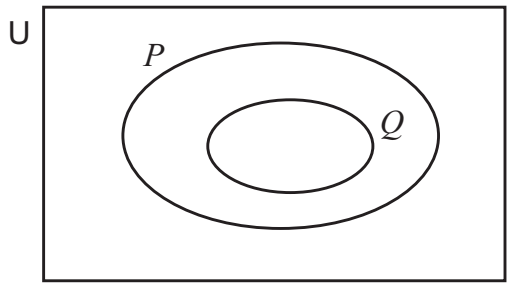
17. Question | 0607 May-June 2025 P4 V3 Q16

16 **(a)** Use set notation to describe the shaded region.



..... [1]

(b) Shade $P \cap Q'$.



[1]

18. Question part 1/2 | 0607 May-June 2025 P4 V3 Q18

18 **(a)** Bruce buys a new car on 1 January 2022.
On 1 January 2023 the value of the car has decreased by 20%.
On 1 January 2024 the value of the car has decreased by 15% of its value on 1 January 2023.

Find the overall percentage decrease in the value of the car on 1 January 2024.

.....% [2]

(b) Sangita buys a car with a value of $20 000.
The value of the car decreases exponentially at a rate of 5% per year.

Calculate the number of complete years it will take for the value of the car to decrease from $20 000 to $8000.

..... [4]

18. Question part 2/2 | 0607 May-June 2025 P4 V3 Q18

(c) Sunil buys a car.
The value of the car decreases exponentially at a rate of 6% per year.
At the end of 9 years the value of the car is $8022.

Calculate the original value of the car.

$ ..... [2]

19. Question | 0607 Oct-Nov 2025 P4 V1 Q2

2 Work out $\dfrac{5.3^2 - \sqrt{4.56}}{1.27}$.

..... [1]

20. Question | 0607 Oct-Nov 2025 P4 V1 Q3

3 In France, the price of a phone is 310 euros.
In Dubai, the price of the same phone is 1185 dirhams.
The exchange rate is 1 euro = 3.95 dirhams.

Find the difference between the two prices.
Give your answer in euros.

..... euros [2]

21. Question | 0607 Oct-Nov 2025 P4 V1 Q4

4 Aisha is paid $17.50 per hour.
Aisha's pay is increased to $19.30 per hour.

Calculate the percentage increase in Aisha's pay.

..... % [2]

22. Question | 0607 Oct-Nov 2025 P4 V1 Q6

6 **(a)** Jeanne invests \$2000 at a rate of 3.5% per year simple interest.

Calculate the interest earned at the end of 8 years.

\$ ..... [2]

(b) Karim invests \$2000 at a rate of 2.8% per year compound interest.

Calculate the interest earned at the end of 10 years.

\$ ..... [3]

(c) Lauren invests \$2000 at a rate of 3.1% per year compound interest.
At the end of n years, the value of the investment is \$3066.56 correct to the nearest cent.

Calculate the value of n.

$n =$ ..... [4]

23. Question | 0607 Oct-Nov 2025 P4 V2 Q1

1 **(a)** By writing each number correct to 1 significant figure, find an estimate for

$$\frac{44.9}{\sqrt{140}} - \frac{2.09^2}{(3.7-1.85)}.$$

You must show your working.

..... [2]

(b) Calculate.

$$\frac{44.9}{\sqrt{140}} - \frac{2.09^2}{(3.7-1.85)}$$

..... [1]

24. Question | 0607 Oct-Nov 2025 P4 V2 Q6

6 Share 630 in the ratio 5 : 7.

..... , ... [2]

25. Question | 0607 Oct-Nov 2025 P4 V2 Q15

15 Erik invests $\$x$.

(a) He receives compound interest at a rate of 7.5% each year.

(i) At the end of 5 years, the value of Erik's investment is \$11 485.

Show that $x = 8000$ correct to the nearest dollar.

[3]

(ii) Find the number of complete years it takes for the total value of his investment of \$8000 to be first greater than \$16 000.

..... [4]

(b) The compound interest rate of 7.5% each year is equivalent to a compound interest rate of y% each month.

Find the value of y.

$y =$ ..... [3]

26. Question | 0607 Oct-Nov 2025 P4 V3 Q2

2 Calculate $\frac{\sqrt[3]{20.2} - 1.7^{\frac{1}{2}}}{5.1}$.

Give your answer correct to 4 decimal places.

..... [2]

27. Question | 0607 Oct-Nov 2025 P4 V3 Q3

3 The exchange rate between pounds and rupees is 1 pound = 350.4 rupees.

Convert 84 000 rupees into pounds.

..... pounds [1]

28. Question | 0607 Oct-Nov 2025 P4 V3 Q6

6 The price of a computer is reduced by 10%.
The price of the computer is then reduced by a further 15%.

Calculate the overall percentage reduction in the price of the computer.

..... % [2]

29. Question | 0607 Oct-Nov 2025 P4 V3 Q13

13 Rob and Sal each have $500 to invest.

(a) Rob invests his $500 at a rate of 2.5% per year **simple** interest.

Calculate the total value of Rob's investment at the end of 4 years.

$ ..... [3]

(b) Sal invests her $500 at a rate of 1.95% per year **compound** interest.

(i) Calculate the value of Sal's investment at the end of 4 years.

$ ..... [2]

(ii) Find the number of complete years it takes for the total value of Sal's investment of $500 to be first greater than $800.

..... [4]

30. Question | 0607 Specimen 2025 P4 Q1

1 Calculate $\frac{0.1^3 - 0.5^2}{0.3^4}$, giving your answer correct to 2 significant figures.

..... [2]

31. Question | 0607 Specimen 2025 P4 Q3

3 In Switzerland the cost of a shirt is 22 Swiss francs.
In France the cost of the same shirt is 19 euros.
1 euro = 1.08 Swiss francs.

Calculate the difference between the cost in Switzerland and the cost in France.
Give your answer in Swiss francs.

..... Swiss francs [2]

10 **(a)** The population of a village increases exponentially at a rate of 6% per year.
In 2023 the population was 901.

(i) Calculate the population in 2022.

..... [2]

(ii) Calculate the population in 2026.

..... [2]

(iii) Find the number of complete years it takes for the population of 901 to first become greater than 1600.

..... [4]

(b) In another village, the population increases exponentially at a rate of r% per year.
At the end of 5 years, the overall increase in the population is 10.41% .

Find the value of r.

$r =$ ..... [3]

33. Question | 0607 Feb-March 2026 P4 V2 Q4

4 These are the ingredients for making 20 ginger biscuits.

ingredient	amount (g)
butter	100
sugar	75
ginger	35
syrup	100
flour	250

(a) Laila makes 48 biscuits.

Work out the amount of sugar Laila needs.

..... g [2]

(b) Girish has 100 g of ginger and large amounts of the other ingredients.

Work out the greatest number of biscuits Girish can make.

..... [2]

34. Question | 0607 Feb-March 2026 P4 V2 Q6

6 A car travels 120 km at an average speed of 75 km/h.

(a) Work out the time taken for the journey.
Give your answer in hours and minutes.

..... h ..... min [3]

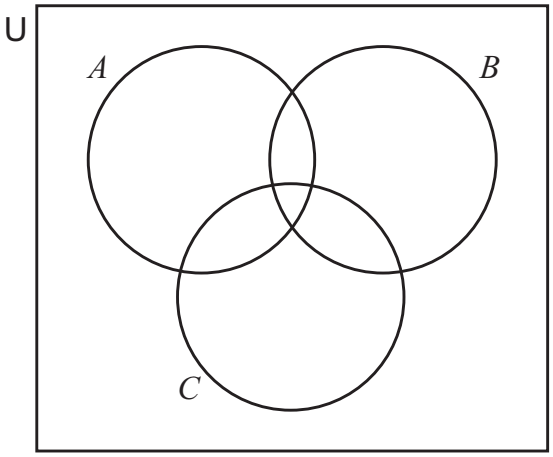
(b) The car then travels a further 120 km at an average speed of 50 km/h.

Calculate the average speed for the complete journey.

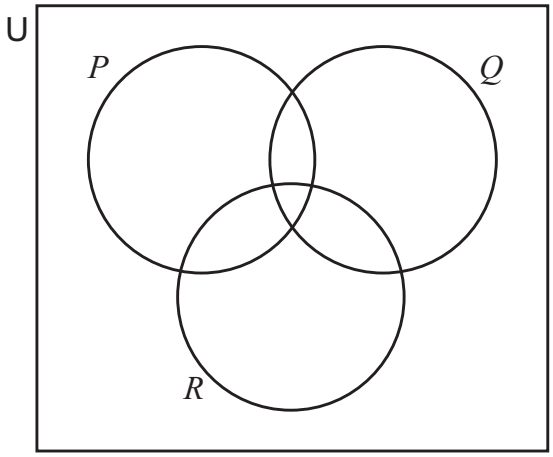
..... km/h [3]

35. Question | 0607 Feb-March 2026 P4 V2 Q8

8 On each Venn diagram, shade the given region.



$A \cap B \cap C'$



$(P \cup R)' \cap Q$

[2]

36. Question | 0607 Feb-March 2026 P4 V2 Q9

9 In a sale, all prices are reduced by 35%.
The sale price of a dress is $31.07 .

Calculate the original price of the dress.

$ ..... [2]

37. Question | 0607 May-June 2026 P4 V1 Q1

1 Calculate $\frac{17}{32} \div \frac{85}{128}$.

..... [1]

38. Question | 0607 May-June 2026 P4 V1 Q2

2 Share \$165 in the ratio 3 : 8.

\$..... , \$..... [2]

39. Question | 0607 May-June 2026 P4 V1 Q9

9 **(a)** Jon invests \$400 at a rate of 3.5% per year simple interest.

Calculate the value of Jon's investment at the end of 5 years.

\$ ..... [3]

(b) Ami invests \$600 at a rate of 3% per year compound interest.

(i) Calculate the value of Ami's investment at the end of 5 years.

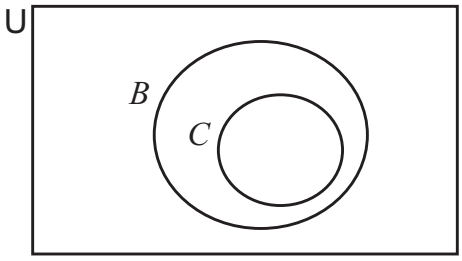
\$ ..... [2]

(ii) Find the number of complete years it takes for the value of Ami's investment of \$600 to be first more than \$850.

..... [4]

40. Question | 0607 May-June 2026 P4 V1 Q11

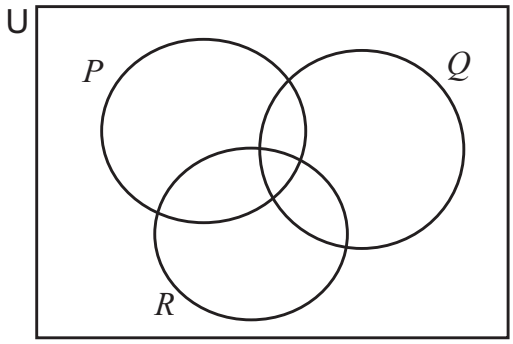
11 **(a)** This is a Venn diagram.



Complete the statement using set notation.

C ..... B [1]

(b) On the Venn diagram, shade $P' \cap (Q \cup R)$.



[1]

41. Question | 0607 May-June 2026 P4 V2 Q6

6 **(a)** Find the highest common factor (HCF) of 180 and 96.

..... [2]

(b) Find the lowest common multiple (LCM) of x^{12} and x^{14}.

..... [1]

42. Question | 0607 May-June 2026 P4 V2 Q7

7 Prices are reduced by 20% in a sale.
The sale price of a computer is $284.80 .

Calculate the original price of the computer.

$ ..... [2]

43. Question | 0607 May-June 2026 P4 V2 Q12

12 The value of a car decreases at a rate of 10% per year.
The value of the car now is $22 680.

(a) Calculate the value of the car 2 years ago.

$ ..... [2]

(b) The value of the car now is $22 680.

Calculate the number of complete years it will take for the value of the car to be first less than $10 000.

..... [4]

44. Question | 0607 May-June 2026 P4 V2 Q13

13 **(a)** Calculate $\left(6.2\times10^{87}\right)\times\left(3\times10^{87}\right)$.
Give your answer in standard form.

..... [2]

(b) Simplify $\left(4\times10^{y}\right)+\left(8\times10^{y-1}\right)$ where y is an integer.
Give your answer in standard form.

..... [2]

45. Question | 0607 May-June 2026 P4 V3 Q1

1 Write 705.180 20

(a) correct to the nearest 10

..... [1]

(b) correct to 3 decimal places.

..... [1]

46. Question | 0607 May-June 2026 P4 V3 Q3

3 Work out.

$$\left(3.1\right)^{3}-\sqrt{18.5}$$

..... [1]

47. Question | 0607 May-June 2026 P4 V3 Q7

7 480 is shared in the ratio $x : y$.

Find an expression for each share.

..... , ... [2]

48. Question | 0607 May-June 2026 P4 V3 Q16

16 Raul bought a house on 1 January 2024.
On 1 January 2025 the value of the house increased by 8%.
On 1 January 2026 the value of the house increased by 5% of its value on 1 January 2025.

The value of the house on 1 January 2026 was $90 720.

(a) Calculate the amount Raul paid for the house on 1 January 2024.

$ ..... [3]

(b) From 2026 the value of the house increases exponentially at the rate of 5% each year.
The value of the house on 1 January 2026 was $90 720.

Find the year in which the value of the house on 1 January will first be greater than $200 000.

..... [4]

Question 17 is on the back page.