1. Question | 0607 Feb-March 2025 P2 V2 Q1

1 Write down the reciprocal of $\frac{1}{5}$.

..... [1]

2. Question | 0607 Feb-March 2025 P2 V2 Q6

6 U = {natural numbers $\leqslant 20$}
A = {multiples of 3}
B = {triangle numbers}

(a) Write down the elements of set A and the elements of set B.

Set A .....

Set B .....
[2]

(b) Write down the elements of $A \cap B$.

..... [1]

3. Question | 0607 Feb-March 2025 P2 V2 Q7

7 Write 84 as a product of its prime factors.

..... [2]

4. Question | 0607 Feb-March 2025 P2 V2 Q8

8 By writing each number correct to 1 significant figure, estimate the value of

$$\frac{5923-2198}{0.5461\times 39.43}.$$

..... [2]

5. Question | 0607 Feb-March 2025 P2 V2 Q21

21 **(a)** Simplify.

$$3\sqrt{12} - \sqrt{48} + \sqrt{75}$$

..... [3]

(b) Rationalise the denominator and simplify.

$$\frac{6}{\sqrt{5} - \sqrt{2}}$$

..... [3]

6. Question | 0607 May-June 2025 P2 V1 Q1

1 This is a list of numbers.

$3.142 \qquad \sqrt{125} \qquad 125 \qquad 81 \qquad 7\frac{2}{3}$

From this list write down

(a) a cube number

..... [1]

(b) an irrational number.

..... [1]

7. Question | 0607 May-June 2025 P2 V1 Q2

2 **(a)** Write $0.003\,094\,8$ correct to 3 significant figures.

..... [1]

(b) Write $579\,644\,358$ correct to the nearest million.

..... [1]

8. Question | 0607 May-June 2025 P2 V1 Q5

5 Work out $1\frac{3}{7} \times 4\frac{2}{3}$.

Give your answer as a mixed number in its simplest form.

..... [3]

9. Question | 0607 May-June 2025 P2 V1 Q7

7 The ratio $a : b = 7 : 12$.
The ratio $b : c = 8 : 5$.

Find the ratio $a : b : c$ in its simplest form.

..... : ..... : ..... [2]

10. Question | 0607 May-June 2025 P2 V1 Q10

10 Work out $4 \times 10^{18} + 3.2 \times 10^{17}$.

Give your answer in standard form.

..... [2]

11. Question | 0607 May-June 2025 P2 V1 Q12

12 $P = 2^3 \times 3^a \times 5^b \times 7$ $Q = 2 \times 3^5 \times 7^c$

The highest common factor (HCF) of P and Q is $2 \times 3^4 \times 7$.

The lowest common multiple (LCM) of P and Q is $2^3 \times 3^5 \times 5^2 \times 7$.

Find the values of a, b and c.

$a =$ .....

$b =$ .....

$c =$ .....

[3]

12. Question | 0607 May-June 2025 P2 V1 Q22

22 Simplify.

(a) $\sqrt{120} \times \sqrt{27}$

..... [2]

(b) $\dfrac{1}{5-2\sqrt{3}}$

..... [2]

13. Question | 0607 May-June 2025 P2 V2 Q1

1 **(a)** Work out $(0.02)^3$.

..... [1]

(b) Write your answer to **part (a)** in standard form.

..... [1]

14. Question | 0607 May-June 2025 P2 V2 Q2

2 This is a list of numbers.

31 33 35 37 39 41

From this list, write down all the prime numbers.

..... [2]

15. Question | 0607 May-June 2025 P2 V2 Q3

3 Write the fraction $\frac{24}{64}$ in its lowest terms.

..... [1]

16. Question | 0607 May-June 2025 P2 V2 Q6

6 **(a)** Share 120 in the ratio 2 : 3.

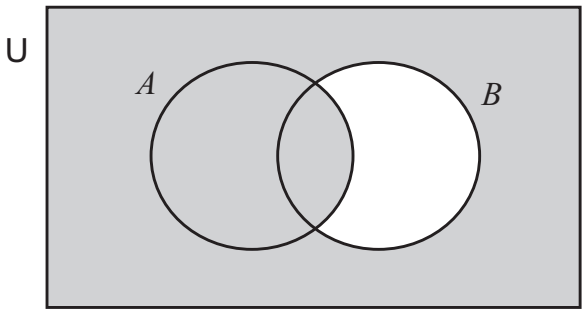
..... , ... [2]

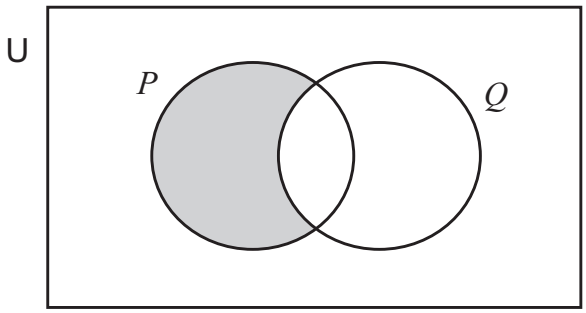
(b) Share Z in the ratio $x : y$.

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

17. Question | 0607 May-June 2025 P2 V2 Q10

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





.... [2]

18. Question | 0607 May-June 2025 P2 V2 Q20

20 **(a)** Rationalise the denominator.

$$\frac{\sqrt{3}-\sqrt{2}}{\sqrt{3}+\sqrt{2}}$$

..... [3]

(b) Expand and simplify.

$$\left(\sqrt{x+1}-\sqrt{x}\right)\left(\sqrt{x+1}+\sqrt{x}\right)$$

..... [2]

Question 21 is printed on the next page.

19. Question | 0607 May-June 2025 P2 V3 Q1

1 Work out.

$2 - 5 \times 3 + 7$

..... [1]

20. Question | 0607 May-June 2025 P2 V3 Q2

2 This is a list of numbers.

20 21 22 23 24 25 26 27

From the list write down

(a) the square number

..... [1]

(b) the prime number

..... [1]

(c) the triangle number.

..... [1]

21. Question | 0607 May-June 2025 P2 V3 Q5

5 Ganpreet and Rahul share \$240 in the ratio 7 : 5.

(a) Show that the value of Rahul's share is \$100.

[1]

(b) Ganpreet spends \$$x$ of her share.
Rahul spends \$$x$ of his share.
The ratio of their remaining money is Ganpreet : Rahul = 2 : 1.

Find the value of x.

$x =$ ..... [3]

22. Question | 0607 May-June 2025 P2 V3 Q7

7 Work out $5\frac{1}{3} \div 1\frac{3}{5}$.

Give your answer as a mixed number in its simplest form.

..... [3]

23. Question | 0607 May-June 2025 P2 V3 Q9

9 Find the value of $16^{-\frac{3}{2}}$.

..... [2]

24. Question | 0607 May-June 2025 P2 V3 Q11

11 **(a)** Simplify.

$$\sqrt{27} - 2\sqrt{75}$$

..... [2]

(b) Rationalise the denominator and simplify.

$$\frac{6}{\sqrt{5} - \sqrt{2}}$$

..... [3]

25. Question | 0607 May-June 2025 P2 V3 Q13

13 Work out.

$$4.9 \times 10^{199} + 4.9 \times 10^{197}$$

..... [2]

26. Question | 0607 Oct-Nov 2025 P2 V1 Q1

1 Complete the table.

Fraction		Decimal		Percentage
$\frac{3}{10}$	=	0.3	=	30
	=	0.09	=	
$\frac{7}{20}$	=		=	

[2]

27. Question | 0607 Oct-Nov 2025 P2 V1 Q2

2 Find the reciprocal of $1\frac{3}{5}$.

..... [2]

28. Question | 0607 Oct-Nov 2025 P2 V1 Q3

3 By writing each number correct to 1 significant figure, estimate the value of

$$\frac{\sqrt{8.76} \times 43.82}{0.592}.$$

..... [2]

29. Question | 0607 Oct-Nov 2025 P2 V1 Q13

13 **(a)** $\dfrac{2^5 \times 2^p}{2^3} = 2^6$

Find the value of p.

$p =$ ..... [1]

(b) Find the value of $64^{-\frac{2}{3}}$.

..... [2]

30. Question | 0607 Oct-Nov 2025 P2 V1 Q17

17 Write $(5-2\sqrt{3})^2$ in the form $a+b\sqrt{3}$.

..... [2]

31. Question | 0607 Oct-Nov 2025 P2 V2 Q1

1 Work out.

(a) $5-4\times3$

..... [1]

(b) $(0.3)^4$

..... [1]

(c) $\sqrt{1\frac{7}{9}}$

..... [2]

32. Question | 0607 Oct-Nov 2025 P2 V2 Q4

4 Write 10.0283 correct to 3 significant figures.

..... [1]

33. Question | 0607 Oct-Nov 2025 P2 V2 Q9

9 Mia walks 11 km in $1\frac{1}{2}$ hours.
She then runs at an average speed of 12 km/h for 15 minutes.

Work out Mia's average speed for the whole journey.
Give your answer in km/h.

..... km/h [3]

34. Question | 0607 Oct-Nov 2025 P2 V2 Q11

11 Write 0.010 02 in standard form.

..... [1]

35. Question | 0607 Oct-Nov 2025 P2 V2 Q16

16 Rationalise the denominator.
Give your answer in its simplest form.

$$\frac{12}{\sqrt{7}+2}$$

..... [3]

36. Question | 0607 Oct-Nov 2025 P2 V3 Q3

3 A train journey starts at 22 35 and takes 2 hours 30 minutes.

(a) Find the time this train journey ends.

..... [1]

(b) The distance of the journey is 200 km.

Work out the average speed of the train.

..... km/h [2]

37. Question | 0607 Oct-Nov 2025 P2 V3 Q5

5 Work out.

$$5\frac{1}{2} \times 1\frac{1}{11}$$

..... [2]

38. Question | 0607 Oct-Nov 2025 P2 V3 Q7

7 $\mathsf{U} = \{ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$

$A = \{\text{odd numbers}\}$
$B = \{\text{square numbers}\}$

(a) Find $A \cap B$.

..... [1]

(b) Find $\text{n}(B')$.

..... [1]

39. Question | 0607 Oct-Nov 2025 P2 V3 Q9

9 Find the value of $81^{-\frac{3}{4}}$.

..... [2]

40. Question | 0607 Oct-Nov 2025 P2 V3 Q11

11 **(a)** Work out $\left(5.7\times10^{17}\right)\times\left(2\times10^{19}\right)$.
Give your answer in standard form.

..... [2]

(b) Work out $\left(5.7\times10^{17}\right)+\left(2\times10^{19}\right)$.
Give your answer in standard form.

..... [2]

41. Question | 0607 Oct-Nov 2025 P2 V3 Q16

16 Rationalise the denominators.

(a) $\frac{5}{\sqrt{7}}$

..... [1]

(b) $\frac{1}{2-\sqrt{2}}$

..... [2]

42. Question | 0607 Specimen 2025 P2 Q2

2 Work out $\sqrt{0.0049}$.

..... [1]

43. Question | 0607 Specimen 2025 P2 Q4

4 Work out $\frac{5}{6}-\frac{3}{4}$.

..... [2]

44. Question | 0607 Specimen 2025 P2 Q5

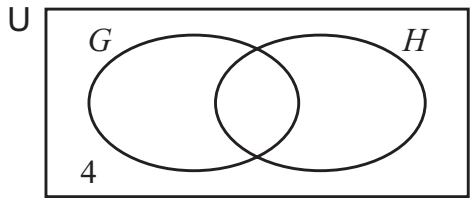
5 Amaya and Dev share some money in the ratio 7 : 5.
Amaya receives $8 more than Dev.

Work out how much Dev receives.

$ ..... [2]

45. Question | 0607 Specimen 2025 P2 Q17

17 In this question you may use the Venn diagram to help you.



$n(U) = 20$ $n(G \cup H)' = 4$ $n(G) = 12$ $n(H) = 11$

(a) Find $n(G \cap H)$.

..... [2]

(b) Find $n(G' \cap H)$.

..... [1]

46. Question | 0607 Specimen 2025 P2 Q18

18 Work out $(3 \times 10^{-11}) \times (4 \times 10^{-8})$.
Give your answer in standard form.

..... [2]

47. Question | 0607 Specimen 2025 P2 Q20

20 Simplify.

$$\sqrt{125} - \sqrt{45}$$

..... [2]

48. Question | 0607 Feb-March 2026 P2 V2 Q2

2 Work out.

$$\frac{(-4)^2}{10-2}$$

..... [2]

49. Question | 0607 Feb-March 2026 P2 V2 Q3

3 Insert one pair of brackets to make this statement correct.

$$6 \times 8 + 3 + 4 \times 5 = 86$$

[1]

50. Question | 0607 Feb-March 2026 P2 V2 Q5

5 Write the ratio $30\,\text{g} : 6\,\text{kg}$ in its simplest form.

..... : ..... [2]

51. Question | 0607 Feb-March 2026 P2 V2 Q6

6 Sami saves \$60.
This is $\frac{2}{5}$ of Sami's total wages.

Find Sami's total wages.

\$ ..... [2]

52. Question | 0607 Feb-March 2026 P2 V2 Q12

12 $P = 3.2 \times 10^{22}$ $Q = 4 \times 10^{21}$

(a) Calculate PQ.
Give your answer in standard form.

..... [2]

(b) Calculate $P + Q$.
Give your answer in standard form.

..... [2]

(c) $QR = 1.2 \times 10^{29}$

Find the value of R.
Give your answer in standard form.

$R =$ ..... [2]

53. Question | 0607 Feb-March 2026 P2 V2 Q15

15 Rationalise the denominator and simplify.

$$\frac{5}{4-2\sqrt{3}}$$

..... [3]

54. Question | 0607 May-June 2026 P2 V1 Q1

1 Write $\frac{31}{7}$ as a mixed number.

..... [1]

55. Question | 0607 May-June 2026 P2 V1 Q2

2 Write 30% as a fraction.

..... [1]

56. Question | 0607 May-June 2026 P2 V1 Q3

3 Write down the value of $\sqrt{196}$.

..... [1]

57. Question | 0607 May-June 2026 P2 V1 Q14

14 Find the value of $27^{-\frac{2}{3}}$.

..... [2]

58. Question | 0607 May-June 2026 P2 V1 Q15

15 **(a)** Write 20 400 in standard form.

..... [1]

(b) Work out $4.2 \times 10^{16} + 3.1 \times 10^{15}$.
Give your answer in standard form.

..... [2]

59. Question | 0607 May-June 2026 P2 V1 Q16

16 Simplify.

$$\sqrt{75} + \sqrt{48} - \sqrt{12}$$

..... [3]

60. Question | 0607 May-June 2026 P2 V2 Q3

3 Sam goes to a friend's home.
Sam arrives at 18 35.
Sam leaves her friend's home at 09 40 the next day.

Work out the length of time Sam is at her friend's home.

..... h ..... min [1]

61. Question | 0607 May-June 2026 P2 V2 Q5

5 Alain invests \$200 at a rate of r% simple interest per year.
At the end of 2 years the value of Alain's investment is \$212.

Work out the value of r.

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

62. Question | 0607 May-June 2026 P2 V2 Q7

7 Work out $1\frac{5}{6} + 3\frac{1}{4}$.

Give your answer as a mixed number in its simplest form.

..... [3]

63. Question | 0607 May-June 2026 P2 V2 Q17

17 **(a)** Simplify.

$$\sqrt{200} + \sqrt{98}$$

..... [2]

(b) Rationalise the denominator and simplify.

$$\frac{5}{5 + \sqrt{5}}$$

..... [3]

Question 18 is on the back page.

64. Question | 0607 May-June 2026 P2 V3 Q1

1 Work out.

(a) $4-3\times2+1$

..... [1]

(b) $(0.11)^2$

..... [1]

(c) $\sqrt{2\frac{1}{4}}$

..... [2]

65. Question | 0607 May-June 2026 P2 V3 Q3

3 Work out.

$$\frac{2}{5}+\frac{3}{10}$$

..... [2]

66. Question | 0607 May-June 2026 P2 V3 Q7

7 Paula drives home after work.

(a) One day Paula starts the journey at 1738 and finishes the journey at 1923.

Find the time this journey takes.
Give your answer in hours and minutes.

..... h ..... min [1]

(b) On another day Paula's journey takes 1 hour 30 minutes.
The distance of this journey is 96 km.

Work out the average speed for this journey.

..... km/h [2]

67. Question | 0607 May-June 2026 P2 V3 Q10

10 Leon sells a chair for $18.
Leon's profit is 20% of the cost of making the chair.

Find the cost of making the chair.

$ ..... [2]

68. Question | 0607 May-June 2026 P2 V3 Q12

12 **(a)** Simplify.

$$\sqrt{75} - \sqrt{27}$$

..... [2]

(b) Rationalise the denominator and simplify.

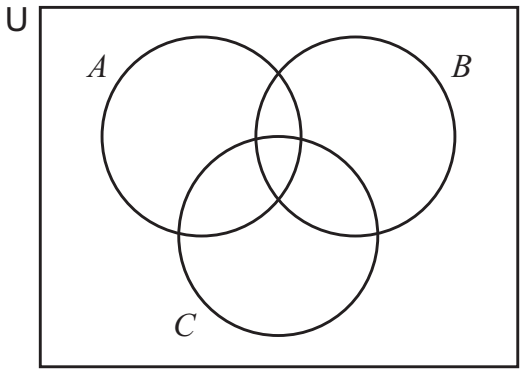
$$\frac{21}{4 - \sqrt{2}}$$

..... [3]

69. Question | 0607 May-June 2026 P2 V3 Q13

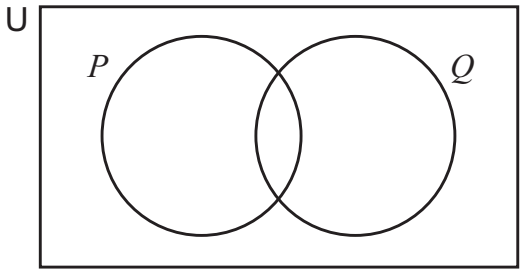
13 Shade the given regions in each of these Venn diagrams.

(a) $(A \cup B \cup C)'$



[1]

(b) $P' \cap Q'$



[1]