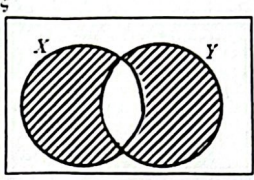
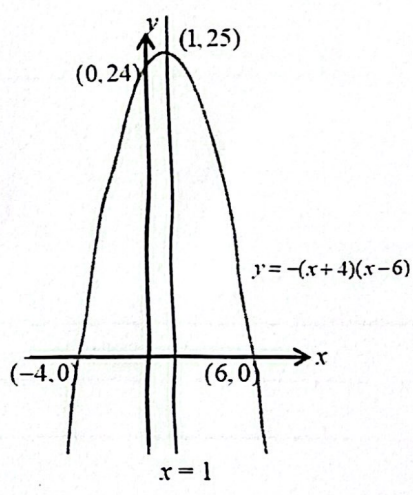
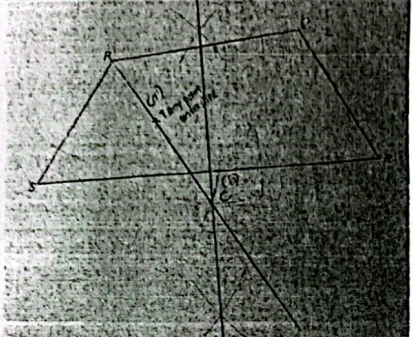


Answer keys

1(a)	$\frac{a^{\frac{4}{3}}}{81b^8}$
1(b)	6
2(a)	137.5°
2(b)	135.6°
3	138
4(a)	Yes, I agree. Since $x = a^6 \times b^{12} \times c^{18}$, all the indices (powers) of the prime factors of x are multiples of 2 and 3 (or multiples of 6), x is both a perfect square and a perfect cube.
4(bi)	Smallest $m = 2 \times 5^2$
4(bii)	Smallest $v = 2^8 \times 5^9$
5(a)	The first year's interest is more than 2% of \$8000 because interest calculated every quarter is based on the new principal which includes interest accumulated so the principal increases every quarter.
5(b)	\$325.66
6	$a = 25, b = -10$
7	$x = 24000$, capacity of tank = 44000 cm^3
8(ai)	86
8(aii)	32
8(aiii)	39
8(b)	75 teenagers' estimate is < 51 marbles
8(ci)	$p = 36$
8(cii)	$\frac{477}{3725}$ or 0.128 (3 s.f.)
9(ai)	Jane should go to <u>XYZ</u> Money Changer because for every USD, she can get <u>0.01</u> more SGD than changing her money at <u>ABC</u> Money Changer.
9(aii)	SGD 254.00
9(bi)	Jane should go to <u>ABC</u> Money Changer because for every 1 CNY will pay <u>0.002</u> less SGD than changing her money at <u>XYZ</u> Money Changer.
9(bii)	CNY 3055.56

10(a)	$\frac{2x^2 + 7x - 18}{2(3 - 2x)(2x - 5)}$
10(b)	$\frac{2}{(2x + 3)(4x^2 + 9)}$
10(c)	$3(c + 2d)(5a - 2b)$
11	$a = \frac{2}{3}b - 10$
12(a)	102
12(b)	$x = 0$
15(a)	
15(b)	$P \cup Q'$ Accept: $P \cup (P \cup Q)'$
16	
17(b)	$d = 1.48$
18(a)	$C = \begin{pmatrix} 280 \\ 320 \end{pmatrix}$
18(b)	$P = \begin{pmatrix} 39360 \\ 21120 \end{pmatrix}$
18(c)	$N = \begin{pmatrix} 1.1 & 0 \\ 0 & 1.2 \end{pmatrix}$
18(d)	$Q = (5768)$
18(e)	The elements of Q represent the <u>total monthly lesson fees collected by Mr Asahi after the fee increase.</u>

19(a)	$n=10$	22(b)	84%
19(b)	144°	23(ai)	$11-3n$
20(a)	241.8°	23(aii)	$11-3n+n^2$
20(bii)	092.7°	23(b)	$7n-5$
20(c)	68.0 m	24(a)	66.7°
20(d)	30.8 m	24(b)	36.9°
21		25(b)	$-\frac{1}{8}a + \frac{3}{4}b$