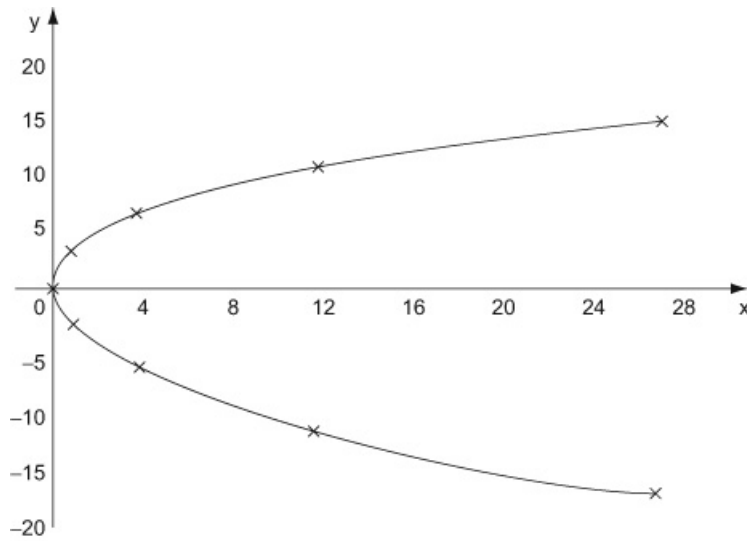


Chapter 3

Exercise 1A

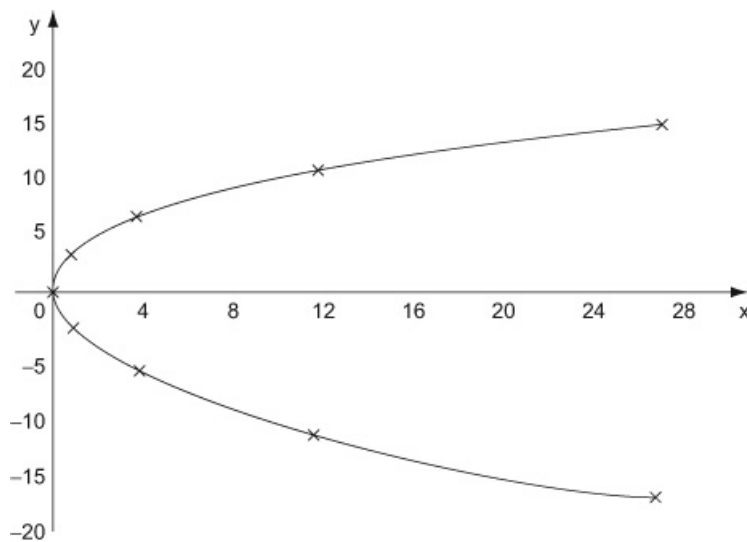
1.

t	-4	-3	-2	-1	-0.5	0	0.5	1	2	3	4
$x=2t^2$	32	18	8	2	0.5	0	0.5	2	8	18	32
$y=4t$	-16	-12	-8	-4	-2	0	2	4	8	12	16



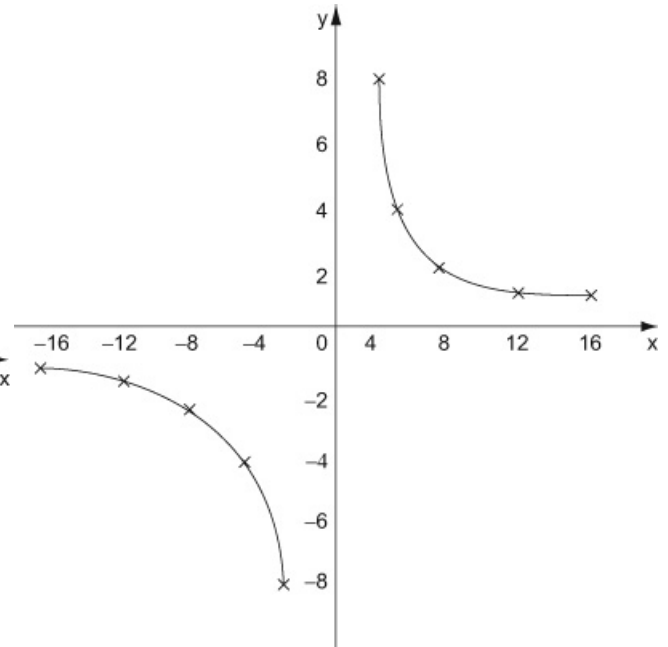
2.

t	-3	-2	-1	-0.5	0	0.5	1	2	3
$x=3t^2$	27	12	3	0.75	0	0.75	3	12	27
$y=6t$	-18	-12	-6	-3	0	3	6	12	18



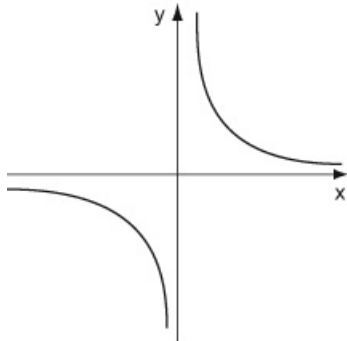
3.

t	-4	-3	-2	-1	-0.5	0.5	1	2	3	4
$x=4t$	-16	-12	-8	-4	-2	2	4	8	12	16
$y=4t$	-1	-43	-2	-4	-8	8	4	2	43	1

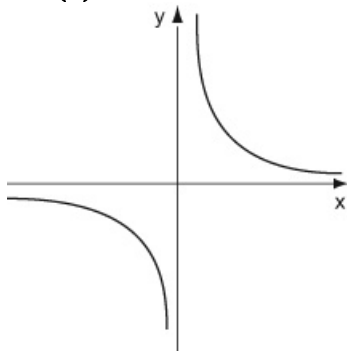


4. (a) $y^2 = 20x$
 (b) $y^2 = 2x$
 (c) $y^2 = 200x$
 (d) $y^2 = \frac{4}{5}x$
 (e) $y^2 = 10x$
 (f) $y^2 = 4\sqrt{3}x$
 (g) $x^2 = 8y$
 (h) $x^2 = 12y$
5. (a) $xy = 1$
 (b) $xy = 49$
 (c) $xy = 45$
 (d) $xy = \frac{1}{25}$

6. (a) $xy = 9$
 (b)

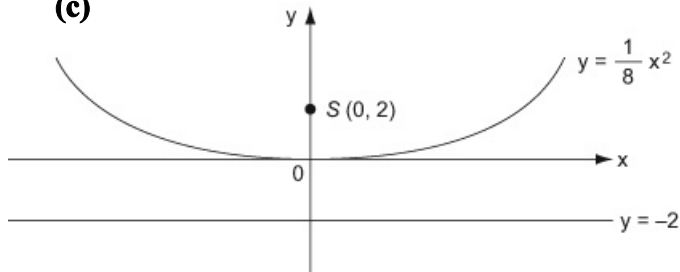


7. (a) $xy = 2$
 (b)



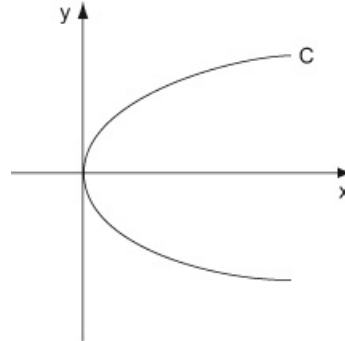
Exercise 3B

- (a) $y^2 = 20x$
 (b) $y^2 = 32x$
 (c) $y^2 = 4x$
 (d) $y^2 = 6x$
 (e) $y^2 = 2\sqrt{3}x$
- (a) $(3, 0); x + 3 = 0$
 (b) $(5, 0); x + 5 = 0$
 (c) $(\frac{5}{2}, 0); x + \frac{5}{2} = 0$
 (d) $(\sqrt{3}, 0); x + \sqrt{3} = 0$
 (e) $(\frac{\sqrt{2}}{4}, 0); x + \frac{\sqrt{2}}{4}$
 (f) $(\frac{5\sqrt{2}}{4}, 0); x + \frac{5\sqrt{2}}{4}$
- (b) $(0, 2); y + 2 = 0$
 (c)



Exercise 3C

- $(3, 3)$ and $(\frac{3}{4}, -\frac{3}{2})$
- $16\sqrt{2}$
- $(25, 5)$
- (a) $y^2 = 24x$
 (b) $(6, 0); x + 6 = 0$
 (c)



- (d) 9
 (e) $12\sqrt{2}$
 (f) $18\sqrt{2}$
- (a) $y^2 = 5x$
 (b) 5
 (c) $(-\frac{5}{4}, 3)$
 (d) $8x - 25y + 85 = 0$
- (a) $(1, 0)$
 (b) 4
 (c) $4x - 3y - 4 = 0$
 (d) $(\frac{1}{4}, -1)$
 (e) $\frac{5}{4}$
- (a) $R(-3, 0), S(3, 0)$
 (b) $P(9, 6\sqrt{3}), Q(-3, 6\sqrt{3})$
 (c) $54\sqrt{3}$
- (a) $a = 1, b = -4$
 (b) $y = x - 8$
 (c) $(10, 2)$
 (d) $y = -x + 12$
 (e) $x = 14 \pm 2\sqrt{13}$

Exercise 3D

- (a) $x - 4y + 16 = 0$
(b) $\sqrt{2}x - 2y + 4\sqrt{2} = 0$
(c) $x + y - 10 = 0$
(d) $16x + y - 16 = 0$
(e) $x + 2y + 7 = 0$
(f) $2x + y - 8\sqrt{2} = 0$
- (a) $x + y - 15 = 0$
(b) $2x - 8y - 45 = 0$
- (a) 4
(b) $y = -x + 12$
(c) (36, -24)
(d) $32\sqrt{2}$
- (a) $x - 8y - 126 = 0$
(b) $(128, \frac{1}{4})$
- (b) $(6\sqrt{2}, 4\sqrt{2})$ or $(-6\sqrt{2}, -4\sqrt{2})$
- (a) $xy = 3$
(b) $8x - 2y - 15\sqrt{3} = 0$
(c) $(-\frac{1}{8}\sqrt{3}, -8\sqrt{3})$
- (a) $\frac{1}{2}; (1, 4)$
(b) (-15, 0)
(c) (-1, 0)
(d) 28

Exercise 3E

- (a) 5
(c) $\frac{25}{2}t^3$
- (b) $(a, -2a)$ and $(16a, 8a)$
- (b) (-4, 5)
(c) (8, 2) and $(-\frac{8}{5}, -10)$
(d) $x + 4y - 16 = 0$; $25x + 4y + 80 = 0$
- (a) $(-at^2, 0)$
(b) $(2a + at^2, 0)$
(c) $2a^2t(1 + t^2)$
- (b) (0, 0), (8, 8) and (8, -8)
(c) $y = 0$, $2x + y - 24 = 0$ and $2x - y - 24 = 0$
- (a) (0, at)
(b) (a, 0)

- (b) -6
(c) (24, 24) and $(\frac{3}{2}, -6)$

Mixed exercise 3F

- (a) (3, 0)
(b) $(\frac{4}{3}, 4)$ (c) 6
- (a) $\frac{3}{2}$
(b) (6, 0)
(d) 30
- (a) $y^2 = 48x$
(b) $x + 12 = 0$
(c) $(16, 16\sqrt{3})$
(d) $96\sqrt{3}$
- (a) (1, 4) and (64, 32)
(c) $x + 2y - 9 = 0$ and $4x + y - 288 = 0$
(d) (81, -36)
(e) $9\sqrt{97}$
- (a) focus of C (a, 0), Q (-a, 0)
(b) $(a, 2a)$ or $(a, -2a)$
- (b) $4x - y = 45$
(c) $(-\frac{3}{4}, -48)$
- $x + 4y - 12 = 0$ and $x + 4y + 12 = 0$
- (a) X (2ct, 0) and Y (0, $\frac{2c}{t}$)
(b) $6\sqrt{2}$
- (b) $4ty = x + 16at^2$
(c) $(8at^2, 6at)$
- (c) $\frac{c^2}{2a}$
(d) $y = \frac{c^2x}{4a^2}$
(e) $\frac{8a}{5}$
(f) $\frac{4a}{5}$