Revision of Algebra SOLUTIONS

1. $x = 2 \quad x = -4$
2. $2x + 3$
3. (a) $\frac{x^2+14x+57}{2(x+5)(x+7)}$
   (b) $\frac{3x+16}{x(x+3)}$
4. $(x + 2)(x + 2)(x + 2)$
   $x + 2$
5. $a = 3 \quad b = 4$
6. $x = 2 \quad y = -1 \quad z = 3$
7. $x = 4 \quad x = 0$
8. $x = 3 \quad x = \frac{25}{8}$
9. $x = 2 \quad y = 3 \quad \text{OR} \quad x = 3 \quad y = 2$
10. $p = 2 \quad q = -5$
    $(x + 3)$
11. $x = 7 \quad x = 4$
12. $x = 3 \quad y = -4 \quad z = 6$
13. $x = 2 \quad x = 1$
14. $x = 4 \quad y = -3 \quad \text{OR} \quad x = -2 \quad y = 1$
15. $a = 2 \quad b = -1$
    $x = 2 \quad x = -3 \quad x = \frac{3}{2}$
16. (a) i. $x < -5 \quad x > 3$
    ii. $-9 \leq x \leq \frac{2}{3}$
    iii. $-3 < x < 3$
    iv. $x < 0 \quad x > 5$
    (b) i. $x < 2 \quad x > 5$
    ii. $x \leq -\frac{8}{5} \quad x > 4$
    (c) i. $-2 < x < 1$
    ii. $-5 \leq x \leq -1$
    iii. $x < -\frac{3}{2} \quad x > \frac{1}{2}$
17. $x = 4$
18. Complete the square for proof.

19. $a = -2 \quad b = 36$
    $x = 3 \quad x = 3 \quad x = -4$

20. $x = 3 \quad x = -2$

21. i. $x = 2$
    ii. $x = 5$

22. i. $x = 4 \quad x = 0$
    ii. $x = 2 \quad x = -3$

23. Use long division.

24. Complete the square for proof.

25. i. $a - b$
    ii. $a + b$
    iii. $2a$
    iv. $2b$
    v. $3a - 2b$
    vi. $\frac{1}{2}(a + b)$

26. $x = -1 \quad x = 2$