# Solutions to Past Paper Questions – Formation and Simplification of Expressions

6) (a) $y^7$
(b) $8x + 17$
(c) (i) $2(2a + 3)$
(ii) $3p(2p - 3q)$

12) (a) $12a^5b^3$ (b) $\frac{125p^9}{q^3}$ (c) $\frac{4t^3}{u}$

11) $8x^2 + 10xy = 2x(4x + 5y)$

18) (a) $x^3$

19) (a) Area $= \frac{1}{2}(x+3+x+5)(2x+1)$
$=\frac{1}{2}(2x+8)(2x+1)$
$=(x+4)(2x+1)$
$=2x^2+9x+4$
(b) Area of square $= (2x + 5)(2x + 5) = 4x^2 + 20x + 25$
Shaded area $= 4x^2 + 20x + 25 - (2x^2 + 9x + 4) = 2x^2 + 11x + 21$

7) (a) $x^5$ (b) $2(2x + 3)$ (c) $x^2 + x - 6$ (d) $2x^5y^6$
(e) $3(a^2 - 4b^2) = 3(a + 2b)(a - 2b)$

4) (a) $6x - 3 - 4x + 6 = 2x + 3$
(b) $y(y + 1)$

14) $(n + 1)^2 - (n - 1)^2 = n^2 + 2n + 1 - (n^2 - 2n + 1)$
$= 4n$
Since n is an integer, 4n is a multiple of 4