1. (a) Factorise $8x - 20$

$4(2x - 5)$

(1)

(b) Factorise fully $10x^2 - 15xy$

$5x(2x - 3y)$

(2)

(3 marks)

---

2. (a) Factorise $3x + 12$

$3(x + 4)$

(1)

(b) Factorise fully $2x^2 - 4xy$

$2x(x - 2y)$

(2)

(c) Expand and simplify $3(2a + 5) + 5(a - 2)$

$6a + 15 + 5a - 10$

$11a + 5$

(2)

(5 marks)

---

3. (a) Expand $3(2y - 5)$

$6y - 15$

(1)

(b) Factorise completely $8x^2 + 4xy$

$4x(2x + y)$

(2)

(3 marks)

---

4. (a) Expand $4(3x + 5)$

$12x + 20$

(1)

(b) Expand and simplify $3(x - 4) - 2(x + 5)$

$3x - 12 - 2x - 10$

$x - 22$

(2)

(3 marks)

---

5. (a) Factorise $x^2 + 7x$

$x(x + 7)$

(2)

(*b*) Expand $x(x + 2)$

$x^2 + 2x$

(2)

(*c*) Factorise completely $2y^2 - 4y$

$2y(y - 2)$

(2)

(6 marks)

---

6. (a) Expand $3(4x + y)$

(2)

$12x + 3y$

(b) Expand $5p(p - 3)$

(2)

$5p^2 - 15p$

(c) Factorise completely $8y^2 - 24xy$

$8y(y - 3x)$

(2)

(6 marks)

---

7. (a) Expand and simplify $3(x + 4) + 2(5x - 1)$

$3x + 12 + 10x - 2$

$13x + 10$

(2)

(b) Factorise completely $6y^2 - 9xy$

$3y(2y - 3x)$

(2)

(4 marks)

---

8. (a) Factorise fully $6y^2 + 12y$

(2)

$6y(y + 2)$

(b) Factorise $5x - 10$

$5(x - 2)$

(1)

(c) Factorise fully $2p^2 - 4pq$

$2p(p - 2q)$

(2)

(5 marks)

---

9. (a) Expand and simplify $3(x + 5) + 2(5x - 6)$

$3x + 15 + 10x - 12$

$13x + 3$

(2)

(b) Factorise $5x + 10$

$5(x + 2)$

(1)

(c) Factorise $x^2 - 7x$

$x(x - 7)$

(1)

(4 marks)

---

10. (a) Expand $x(x + 2)$

$x^2 + 2x$

(2)

(b) Factorise $15x - 10$

$5(3x - 2)$

(2)

(c) Expand and simplify $2(x - y) - 3(x - 2y)$

$2x - 2y - 3x + 6y$

$-x + 4y$

(2)

(6 marks)

---

11. (a) Factorise $4x + 10$

(1)

$2(2x + 5)$

(b) Factorise fully $6y^2 + 12y$

(2)

$6y(y + 2)$

(c) Factorise $4 + 6x$

$2(2 + 3x)$

(2)

(5 marks)

---

12. (a) Expand $3(2y - 5)$

$6y - 15$

(1)

(b) Factorise completely $8x^2 + 4xy$

$4x(2x + y)$

(2)

(c) Factorise $4x + 10y$

$2(2x + 5y)$

(2)

(5 marks)

---

13. (a) Expand $3(x + 4)$

$3x + 12$

(1)

(b) Expand $x(x^2 + 2)$

$x^3 + 2x$

(2)

(c) Factorise $x^2 - 6x$

$x(x - 6)$

(1)

(4 marks)

---

14. (a) Factorise $p^2 + p$

$p(p + 1)$

(1)

(b) Factorise $x^2 + 7x$

$x(x + 7)$

(1)

(c) Expand and simplify $4(x - 3) - 2(1 - x)$

$4x - 12 - 2 + 2x$ $6x - 14$

(2)

(4 marks)

---

15. (a) Factorise $4x + 10y$

$2(2x + 5y)$

(1)

(b) Factorise $x^2 + 7x$

$x(x + 7)$

(1)

(c) Expand $x^2(x + 5)$

$x^3 + 5x^2$

(2)

(4 marks)

---

16. (a) Expand $5(2y - 3)$

$10y - 15$

(1)

(b) Expand the brackets $p(q - p^2)$

$pq - p^3$

(1)

(c) Expand and simplify $5(3p + 2) - 2(5p - 3)$

$15p + 10 - 10p + 6$

$5p + 16$

(2)

(4 marks)

---

17. (a) Expand $3(2g - 1)$

$6g - 3$

(1)

(b) Expand $2d(d + 3)$

$2d^2 + 6d$

(2)

(c) Factorise $p^2 + 6p$

$p(p + 6)$

(2)

(5 marks)

---

18. (a) Multiply out $7(n - 3)$

$7n - 21$

(1)

(b) Expand $5(2y - 3)$

$10y - 15$

(1)

(c) Expand and simplify

$2(3x + 4) - 3(4x - 5)$

$6x + 8 - 12x + 15$

$23 - 6x$

(2)

(4 marks)

---

19. (a) Expand $y(y^3 + 2y)$

$y^4 + 2y^2$

(2)

(b) Factorise completely $6x^2 - 9xy$

$3x(2x - 3y)$

(2)

(c) Expand and simplify $5(3p + 2) - 2(5p - 3)$

$15p + 10 - 10p + 6$

$5p + 16$

(2)

(6 marks)

---

20. Expand the brackets

(i) $4(2x - 3)$

$8x - 12$

(2)

(ii) $p(q - p^2)$

$pq - p^3$

(2)

(ii) $t(3t^2 + 4)$

$3t^3 + 4t$

(2)

(6 marks)

---

21. (a) Factorise $3t - 12$

$3(t - 4)$

(2)

(b) Factorise $y^2 + y$

$y(y + 1)$

(1)

(c) Expand and simplify $3(2x - 1) - 2(2x - 3)$

$6x - 3 - 4x + 6$

$2x + 3$

(2)

(6 marks)
