

**TB(3A) Ch. 1 More about Factorization of Polynomials
Conventional Questions**

1. [16-17 S.2 Mid-year Exam #5]

- (a) Factorize (i) $16 - 8x + x^2$, (1 mark)
(ii) $16 - x^2$. (1 mark)
- (b) Hence, factorize $2(16 - 8x + x^2) - 3(16 - x^2)$. (3 marks)

2. [16-17 S.2 Mid-year Exam #6]

- (a) Factorize (i) $4x^2 + 5x - 9$, (1 mark)
(ii) $x^3 - 1$. (1 mark)
- (b) Hence, factorize $x^3 + 4x^2 + 5x - 10$. (2 marks)

3. [16-17 S.2 Mid-year Exam #11]

- Factorize $8x^3 - 36x^2y + 54xy^2 - 27y^3$. (3 marks)

4. [16-17 S.2 Final Exam #2]

- (a) Factorize $x^2 - x - 2$. (1 mark)
- (b) Simplify $\frac{(x-1)^2}{x(x+1)} \times \frac{x}{x-1}$. (1 mark)
- (c) Simplify $\frac{x+1}{x-1} - \frac{x-1}{x+1}$. (2 marks)

5. [17-18 S.3 Mid-year Exam #1]

- (a) (i) Factorize $a^2 - 4a - 21$. (1 mark)
(ii) Factorize $a^3 - 343$. (1 mark)
- (b) Hence, or otherwise, factorize $a^3 + a^2 - 4a - 364$. (2 marks)

6. [17-18 S.3 S Test 2 #2]

- (a) Factorize $2a^2 - 5a - 3$. (1 mark)
- (b) Factorize $2a^2 - 5a - 3 - b^2a + 3b^2$. (1 mark)

7. [17-18 S3 Final Exam, 1]

- (a) Factorize $6x^2 + 11x - 7$. (1 mark)
- (b) Factorize $8x^3 + 6x^2 + 11x - 8$. (1 mark)

8. [17-18 S4 Final Exam, 2]

Factorize

(a) $p^2 + p - 12$,

(b) $p^2 + p - 12 - qp + 3q$.

(3 marks)

9. [18-19 S3 S Test 1, 1]

Factorize the following expressions.

(a) (i) $x^2 - 6x + 5$

(1 mark)

(ii) $x^2 - 6x + 5 - kx + k$

(2 marks)

(b) $a^3 + 8b^3 + ac + 2bc$

(2 marks)

10. [18-19 S3 Mid-year, 1]

Factorize

(a) $3x^2 - 2xy - 8y^2$,

(1 mark)

(b) $2x^3 - 16y^3$,

(2 marks)

(c) $3x^2 - 2xy - 8y^2 - 2x^3 + 16y^3$.

(2 marks)

11. [18-19 S3 Final, 1]

Factorize

(a) $x^2 - 14x + 24$,

(1 mark)

(b) $x^2 - 14x + 24 + xy - 2y$.

(2 marks)

12. [19-20 Standardized test 1, #1]

Factorize the following expressions.

(a) $14x^2 + 3x - 2$

(1 mark)

(b) $2x^2 - 10x + 12$

(2 marks)

13. [19-20 Standardized test 1, #9]

(a) Factorize $8x^3 - 27$.

(1 mark)

(b) Hence, or otherwise, factorize $8x^3 - 22x^2 + 3x + 18$.

(3 marks)

14. [19-20 Mid-year, #1]

Factorize

(a) $x^3 - x^2y + 6x^2$

(1 mark)

(b) $x^3 - x^2y + 6x^2 - 4x + 4y - 24$.

(3 marks)

15. [19-20 Mid-year, #2]

Factorize $2(a-2)^3 - 16$.

(3 marks)

16. [20-21 Mid-year, #1]

Factorize

(a) $x^2 - 13x - 30$,

(1 mark)

(b) $x^2 - 13x - 30 - xy + 15y$.

(2 marks)

17. [20-21 Mid-year, #2]

Factorize $125x^3 - 64y^3$.

(2 marks)

18. [20-21 Final Exam, #1]

Factorize

(a) $18y^2 + 50y - 12$,

(1 mark)

(b) $(x-2)(3x+4) + 3$.

(2 marks)

~ End ~