TB(3A) Ch. 1 More about Factorization of Polynomials
Multiple Choice Questions

1. [16-17 S2 Mid-Year Exam, #14]

Factorize $3a^2 - 12a^4$ completely.

A. $3a^2(1-2a)^2$

B. $3a^2(1-2a^2)^2$

C. $3a^2(1+2a)(1-2a)$

D. $3a^2(1+2a^2)(1-2a^2)$

2. [16-17 S2 Mid-Year Exam, #15]

Factorize $ab - bc - b^2 + ac$.

A. $(a-b)(b-c)$

B. $(a-b)(b+c)$

C. $(a+b)(b-c)$

D. $(a+b)(b+c)$

3. [16-17 S2 Mid-Year Exam, #16]

Which of the following have $3x-4$ as a factor?

I. $6x^2 - 23x + 20$

II. $9x^2 + 16$

III. $27x^3 - 64$

A. I and II only

B. I and III only

C. II and III only

D. I, II and III

4. [16-17 F.2 Mid-year #18]

Simplify $\dfrac{a^2-b^2}{(a-b)^2} \div \dfrac{(a+b)^2}{a^3+b^3}$.

A. $\dfrac{a^2-ab+b^2}{a-b}$

B. $a+b$

C. $\dfrac{(a+b)^2}{a-b}$

D. $\dfrac{a^2-ab+b^2}{a+b}$

5. [16-17 S2 Final Exam, #13]

Factorize $3p^2 - 7pq + 4q^2 - 8q + 6p$.

A. $(p - q - 2)(3p - 4q)$

B. $(p - q + 2)(3p - 4q)$

C. $(p + q - 2)(3p + 4q)$

D. $(p + q + 2)(3p + 4q)$

6. [17-18 S3 Mid-year Exam, #1]

Factorize $12a^2 - 7a - 12$.

A. $(3a + 4)(4a - 3)$

B. $(3a - 4)(4a + 3)$

C. $(3a - 4)(4a - 3)$

D. $(3a + 4)(4a + 3)$

7. [17-18 S3 Mid-year Exam, #12]

$256 + 4m^3 =$

A. $4(4 + m)^3$.

B. $4(4 + m)(16 - 4m + m^2)$.

C. $4(8 + m)(64 + 8m + m^2)$.

D. $4(8 + m)(64 - 8m + m^2)$.

8. [17-18 S3 Final Exam, #1]

Factorize $54a^3 - 2b^3$.

A. $2(3a - b)(9a^2 + 3ab + b^2)$

B. $2(3a - b)(9a^2 - 3ab + b^2)$

C. $2(3a + b)(9a^2 + 3ab + b^2)$

D. $2(3a + b)(9a^2 - 3ab + b^2)$

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

Factorize $4x^2 - 15xy + 9y^2$.

A. $(x - 3)(4x - 3)$

B. $(x - 3)\left(x - \frac{3}{4}\right)$

C. $(x + 3y)(4x + 3y)$

D. $(x - 3y)(4x - 3y)$

10. [18-19 S3 S Test 1, #10]

Which of the following are factors of $-x^4-2x^2+3$?

I. x^2+3

II. $1-x$

III. $1+x$

A. I only

B. I and III only

C. II and III only

D. All of the above

11. [18-19 S3 Mid-year, #1]

Factorize a^2-6a+5.

A. $(a+1)(a+5)$

B. $(1-a)(a-5)$

C. $(a-1)(a-5)$

D. $(a+1)(a-5)$

12. [18-19 S3 Mid-year, #11]

$\dfrac{x^2-5x+6}{(3-x)^2}$ =

A. $\dfrac{x+2}{3-x}$.

B. $\dfrac{x+2}{x-3}$.

C. $\dfrac{2-x}{x-3}$.

D. $\dfrac{2-x}{3-x}$.

13. [18-19 S3 Mid-year, #12]

Which of the following are factors of $x^2(7-2x^2)+4$?

I. $2x^2+1$

II. $2-x$

III. $2+x$

A. I and II only

B. I and III only

C. II and III only

D. I, II and III

14. [18-19 S3 S Test 2, #1]

Which of the following is **NOT** a polynomial?

A. 1

B. $\frac{x}{-y}$

C. $\frac{-k^2}{3}$

D. $2x+5x^2$

15. [18-19 S3 Final, #13]

Factorize $72a^3-1125$.

A. $9(2a-5)(2a^2+10a+25)$

B. $9(2a-5)(4a^2-10a+25)$

C. $9(2a-5)(4a^2+10a+25)$

D. $9(2a-5)(4a^2+20a+25)$

16. [19-20 Standardized test 1, #1]

Which of the following polynomial cannot be factorized?

A. $x^2 + 9$

B. $x^2 - 9$

C. $x^3 + 27$

D. $x^3 - 27$

17. [19-20 Standardized test 1, #6]

Factorize $-8x^2 + 22xy - 15y^2$.

A. $(2x- 3)(4x - 5)$

B. $(2x- 3)(5 - 4x)$

C. $(2x- 3y)(4x - 5y)$

D. $(2x- 3y)(5y - 4x)$

18. [19-20 Mid-year, #1]

$10x^2+13xy-3y^2=$

A. $(2x - 3y)(5x - y)$.

B. $(2x + 3y)(5x - y)$.

C. $(2x - 3y)(y - 5x)$.

D. $(2x + 3y)(y - 5x)$.

19. [20-21 Mid-year, #1]

Factorize $3m^2 + 2mn - 8n^2$.

A. $(m - 2n)(3m + 4n)$
B. $(m + 2n)(3m - 4n)$
C. $(m + 2n)(4m - 3n)$
D. $(2m + n)(3m - 4n)$

20. [20-21 Mid-year, #6]

Factorize $-3m^3 - 1029n^3$.

A. $-3(m - 7n)(m^2 + 7mn + 49n^2)$
B. $-3(m + 7n)(m^2 - 7mn + 49n^2)$
C. $-3(m + 7n)(m^2 - 14mn + 49n^2)$
D. $-3(m - 7n)(m^2 + 14mn + 49n^2)$

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

Factorize $2a^2 - 3ab - 9b^2$.

A. $(3a + 2b)(a - 3b)$
B. $(3a - 2b)(a + 3b)$
C. $(2a + 3b)(a - 3b)$
D. $(2a - 3b)(a + 3b)$

22. [20-21 Final Exam, #13]

Factorize $-8a^3 - 125b^3$.

A. $(2a - 5b)(4a^2 + 10ab + 25b^2)$
B. $(2a - 5b)(4a^2 + 20ab + 25b^2)$
C. $-(2a + 5b)(4a^2 - 20ab + 25b^2)$
D. $-(2a + 5b)(4a^2 - 10ab + 25b^2)$

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