TB(2A) Ch. 4 Factorization of Polynomials
Multiple Choice Questions

1. [16 - 17 F.2 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 F.2 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. [17 - 18 F.2 Mid Year Exam #4]

Factorize $ac - bd + ad - bc$.

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

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

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

D. $(a - c)(b - d)$

4. [17 - 18 F.2 Mid Year Exam #12]

Factorize $x^3 - 2x^2 + 2x - 4$.

A. $(x - 2)(x^2 - 2)$

B. $(x - 2)(x^2 + 2)$

C. $(x + 2)(x^2 - 2)$

D. $(x + 2)(x^2 + 2)$

5. [17 - 18 F.2 S Test 1 #3]

Factorize $26-13y-2x+xy$.

A. $(13-x)(2-y)$

B. $(13-x)(2+y)$

C. $(x-13)(2-y)$

D. $(x-13)(2+y)$

6. [17 - 18 F.2 Final Exam #11]

Factorize $1-(x^2-2xy+y^2)$.

A. $(1+x-y)(1+x+y)$

B. $(1-x-y)(1+x-y)$

C. $(1-x+y)(1+x-y)$

D. $(1-x-y)(1+x+y)$

7. [18 - 19 F.2 S Test #2]

Factorize $-2xy-4y+8xy^2$.

A. $2x(4y^2-y-2)$

B. $-2(xy+2y-4xy^2)$

C. $-2y(x+2-4xy)$

D. $-2y(x-2+4xy)$

8. [18 - 19 F.2 S Test #6]

Factorize $48x^3+120x^2y+75xy^2$.

A. $3x(4x+5y)^2$

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

C. $3(2x+3y)^2$

D. $3(4x+5y)^2$

9. [18 - 19 F.2 S Test #7]

Factorize $(3x+y)^2-10(3x+y)+25$.

A. $(3x+y-25)^2$

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

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

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

10. [18 - 19 F.2 Mid-year #13]

Which of the following are the factors of $36a^2 - 24ab + 4b^2$?

I. 4

II. $3a - b$

III. $6a - 2b$

A. I and II only

B. I and III only

C. II and III only

D. I, II and III

11. [18 - 19 F.2 Final Exam #3]

Which of the following have $a - b$ as a factor?

I. $ac - bc + ad - bd$

II. $a^2 - b^2$

III. $(a - b)^2$

A. I and II only

B. I and III only

C. II and III only

D. I, II and III

12. [19 - 20 F.2 Standardized test 1, #3]

Factorize $4x^2 - 49y^2$.

A. $(2x - 7y)^2$ **B.** $(4x - 49y)^2$

C. $(2x + 7y)(2x - 7y)$ **D.** $(4x + 49y)(4x - 49y)$

13. [19 - 20 F.2 Standardized test 1, #8]

Factorize $ax^2 + ay^2 + 2axy - bx - by$.

A. $(x - y)(ax + ay - b)$ **B.** $(x + y)(ax + ay - b)$

C. $(x - y)(ax + ay + b)$ **D.** $(x + y)(ax - ay + b)$

14. [19 - 20 F.2 Mid-year exam, #13]

Which of the following polynomials has the factor $a + b$?

I. $-3a + 3b$

II. $4(a + b) + a^2 + b^2$

III. $a^2 - 3a + ab - 3b$

A. I only **B.** III only

C. I and II only **D.** II and III only

15. [20-21 F.2 Mid-year exam, #9]

Which of the following are the factors of $(a+2b)^2-(2a-b)^2$?

I. $3a+b$

II. $3a-b$

III. $a-3b$

A. I and II only

B. I and III only

C. II and III only

D. I, II and III

16. [20-21 S. 2 Final exam, #14]

Which of the following is **NOT** a factor of $6x-10y+36x^2-100y^2$?

A. $3x-5y$

B. 2

C. $5y-3x$

D. $1+6x-10y$

17. [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. $(3a+4)(4a+3)$

18. [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. $(x-3y)(4x-3y)$

19. [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

20. [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. $(a+1)(a-5)$

21. [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. $\dfrac{2-x}{3-x}$.

22. [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

23. [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. $(2x-3y)(5y-4x)$

24. [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. $(2x+3y)(y-5x)$.

25. [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. $(2m+n)(3m-4n)$

26. [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. $(2a-3b)(a+3b)$

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