

TB(1B) Ch. 12 Manipulation of Simple Polynomials Multiple Choice Questions

1. [13-14 Mid-year Exam]

Which of the following is a monomial?

- A. 3 B. $3x + y$
C. $\frac{3}{x}$ D. $3x^2 + 2x + 1$

2. [13-14 Mid-year Exam]

In the expression $a \times a \times 3 \div 2 - 5 + 3ab$, which of the following is not true?

- A. There are 6 terms.
B. The degree of $3ab$ is 2.
C. The constant term is -5 .
D. The coefficient of a^2 is 1.5.

3. [13-14 Mid-year Exam]

Solve the literal equation $\frac{1}{5} \left(\frac{x}{2} - \frac{5a}{3} \right) = x$ for x .

- A. $x = -\frac{10a}{27}$ B. $x = -\frac{5a}{3}$
C. $x = 0$ D. $x = a$

4. [13-14 Final Exam]

Factorize $xy - y - 3x + 3$.

- A. $(x-1)(y-3)$
B. $(x-1)(y+3)$
C. $(x-3)(y-1)$
D. $(x-3)(y+1)$

5. [14-15 Mid-year Exam #5]

Consider the polynomial $4x^4 - 4xy^3 + 4x^2y^3$. Which of the following is true?

- | | <u>Degree</u> | <u>Coefficient of xy^3</u> |
|----|---------------|---|
| A. | 4 | -4 |
| B. | 4 | 4 |
| C. | 5 | -4 |
| D. | 5 | 4 |

6. [14-15 Mid-year Exam #6]

Which of the following is the solution of the equation $2^x = 16$?

- A. 8 B. 4
C. -4 D. -8

7. [14-15 Mid-year Exam #14]

Which of the following is a pair of like terms?

- A. x and $\frac{1}{x}$
- B. $2a$ and $2a^2$
- C. 5 and $\frac{1}{5}$
- D. xy^3 and yx^3

8. [14-15 Mid-year Exam #15]

Which of the following about the polynomial $(x-2)(x^2+x+3)$ is true?

	<u>Degree</u>	<u>Constant Term</u>
A.	2	-6
B.	2	-2
C.	3	-6
D.	3	-2

9. [14-15 Mid-year Exam #16]

$$2^{3k-3} \div 2^{k-1} =$$

- A. 2^3
- B. 2^4
- C. 2^{2k-4}
- D. 2^{2k-2}

10. [15-16 Mid-year Exam #6]

What is the coefficient of the y^2 term in the polynomial $4xy + 10xy^2 - 8y^2$?

- A. -8
- B. 2
- C. 6
- D. 8

11. [15-16 Mid-year Exam #7]

Which of the following algebraic expressions is a polynomial with degree 3?

- A. $-xy^2$
- B. $1 + \frac{1}{x^3}$
- C. $x + x^2 + x^4$
- D. $x - 3y + 5z$

12. [15-16 Mid-year Exam #16]

$$8a^6b^2 \div (2a^2b \times 4ab^2) =$$

- A. $\frac{a^3}{b}$.
- B. ab^2 .
- C. a^3b .
- D. $16a^5b^3$.

13. [15-16 Mid-year Exam #17]

$$-2(m+3)(2m^2 - m + 3) =$$

- A. $-4m^3 - 10m^2 - 18$.
- B. $-4m^3 + 8m^2 - 9m + 9$.
- C. $-4m^3 + 14m^2 - 12m + 18$.
- D. $8m^3 + 20m^2 + 36$.

14. [15-16 Final Exam, #7]

What is the value of the polynomial $x^2 - 3x + 5$ when $x = -1$?

- A. 1
- B. 7
- C. 9
- D. 10

15. [15-16 Final Exam, #12]

Expand and simplify $5x - (x - 1)^2$.

- A. $-x^2 + 7x - 1$
- B. $-x^2 + 5x + 1$
- C. $-x^2 + 5x - 1$
- D. $-x^2 + 3x - 1$

16. [16-17 Mid-year Exam, #12]

Simplify $-2a + \left(\frac{6a^2}{5}\right) \div \left(\frac{-12a}{5b}\right) + 3ab$.

- A. $-2a + \frac{7ab}{2}$
- B. $-2a + \frac{5ab}{2}$
- C. $-2a - \frac{5ab}{2}$
- D. $-2a - \frac{7ab}{2}$

17. [16-17 Mid-year Exam, #13]

Find the number of terms after expanding $12xy - (3x + 2y)^2$.

- A. 2
- B. 3
- C. 4
- D. 5

18. [16-17 Mid-year Exam, #16]

Consider the polynomial $-2t^3 - t^2 + 7$.

Find the value of the polynomial when $t = -\frac{1}{2}$.

- A. $\frac{77}{12}$
- B. $\frac{13}{2}$

- C. 7 D. $\frac{15}{2}$

19. [16-17 Mid-year Exam, #17]

Consider the polynomial $2a^2b + 4abc - 5a^2b^2c$. Which of the following is true?

	Degree	Coefficient of a^2b^2
A.	5	-5
B.	5	0
C.	3	4
D.	3	2

20. [16-17 Mid-year Exam, #18]

$$3 \times (-48x^6y^8 \div 8x^2y^2) =$$

- A. $-6x^3y^4$.
 B. $-18x^3y^4$.
 C. $-6x^4y^6$.
 D. $-18x^4y^6$.

21. [16-17 Final Exam, #7]

Consider the polynomial $-x^2y + 2x - 1$. Which of the following is correct?

	Degree of the polynomial	Coefficient of x^3
A.	2	-1
B.	2	0
C.	3	0
D.	3	-1

22. [16-17 Final Exam, #12]

$$4a(a^2 + 2a - 3) - (2a + 1)(3a - 2) =$$

- A. $4a^3 + 2a^2 - 13a + 2$.
 B. $4a^3 + 2a^2 - 11a + 2$.
 C. $4a^3 + 2a^2 + 11a - 2$.
 D. $4a^3 + 14a^2 - 13a - 2$.

23. [16-17 Final Exam, #13]

$$(x+1)(1-x) + x - 1 =$$

- A. $x(1-x)$.
 B. $x(x-1)$.
 C. $(1+x)(1-x)$.
 D. $-x^2 + x + 1$.

24. [17-18 S. Test #8]

Which of the following are incorrect?

- I. $(a^2)^3 = a^5$
 II. $(ab)(ab) = ab^2$

III. $(ab) \div (-ab) = 0$

- A. I and II only B. I and III only
C. II and III only D. I, II and III

25. [17-18 S. Test #10]

$-a - a \times a - a =$

- A. 0 B. $-2a$
C. $-2a^2 - a$ D. $-2a - a^2$

26. [17-18 Mid-year Exam, #7]

What is the degree of polynomial $9a^3 + 8a^2b^2 - 7a^2 + 6$?

- A. 3
B. 4
C. 6
D. 9

27. [17-18 Mid-year Exam, #8]

$3^n \times 3^n =$

- A. 3^{2n}
B. 6^n
C. 6^{2n}
D. 9^{2n}

28. [17-18 Mid-year Exam, #9]

Find the value of the polynomial $x^2 + 2xy + y^2$ when $x = -1$ and $y = 3$.

- A. -2
B. 0
C. 4
D. 16

29. [17-18 Mid-year Exam, #14]

Which of the following are like terms?

- I. a^2b
II. $4ab^2$
III. $\frac{a^2b}{4}$

- A. I and II only
B. I and III only
C. II and III only
D. I, II and III

30. [17-18 Mid-year Exam, #15]

The coefficient of the xy term in the expansion $(x + y)(2y - x)$ is

- A. -3 .
B. 0.

- C. 1 .
- D. 2 .

31. [17-18 Mid-year Exam, #1]

$$7^2 \div 7^n =$$

- A. 7^{2-n} .
- B. 7^{2n} .
- C. 49^{2-n} .
- D. 49^{2+n} .

32. [17-18 Mid-year Exam, #13]

For $a^3bc^2 + 2a^3 - \frac{2ab}{3} - 6$, which of the following is true?

- A. It is a monomial.
- B. The constant term is 6.
- C. The coefficient of ab is -2 .
- D. The degree of the polynomial is 6.

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