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

Multiple Choice Questions

1. [11-12 Standardized Test 1, 5]

Simplify $-4p+3p-5p^2+6q+1-2q$.

A. $1-2p^2$

B. $-p-5p^2+5q$

C. $1-p-5p^2+4q$

D. $1-7p-5p^2+4q$

2. [11-12 Standardized Test 1, 6]

Simplify $(g-2h)-(3h-4s)+(5s-6g)$.

A. $7g+h+s$

B. $7g+h+9s$

C. $-5g-5h+s$

D. $-5g-5h+9s$

3. [11-12 Standardized Test 1, 7]

Simplify $15m^7 \div (3m^4 \div 5m^2)$.

A. m

B. $25m$

C. $9m^9$

D. $25m^5$

4. [11-12 Standardized Test 1, 8]

The general term of the sequence

$-3,\ 1,\ -\frac{1}{3},\ \frac{1}{9},\ \ldots$ is

A. $3\left(\frac{1}{3}\right)^n$.

B. $9\left(-\frac{1}{3}\right)^n$.

C. $-9\left(\frac{1}{3}\right)^n$.

D. $-3\left(-\frac{1}{3}\right)^n$.

5. [11-12 Standardized Test 1, 9]

Consider the polynomial $x+1-2x^2$, which of the following is/are correct?

I. There is no constant term.

II. The coefficient of x^2 is 2.

III. The degree of the polynomial is 2.

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

6. [11-12 Mid-year Exam]

Simplify $-2x^2 + 3x + 2 - 6 + 2x + 4x^2$.

A. $7x^5 - 4$
B. $2x^2 + 5x - 4$
C. $2x^2 + 5x + 4$
D. $6x^2 - 5x - 4$

7. [11-12 Mid-year Exam]

Which of the following is/are correct for the polynomial $2a^3b + 7b^2 \div 4 - a \times 3$?

I. There are 5 terms.

II. 4 is the constant term.

III. The degree of the polynomial is 7.

IV. The coefficient of a^3b is 2.

A. I only
B. IV only
C. I and III only
D. II and IV only

8. [11-12 Mid-year Exam]

$(-2a)^3 - (-b)^2 + a^3 =$

A. $-5a^3 - b^2$
B. $-5a^3 + b^2$
C. $-7a^3 - b^2$
D. $-7a^3 + b^2$

9. [11-12 Mid-year Exam]

$(p+q)^2 - 4(p+q^2) =$

A. $p^2 - 4p$
B. $p^2 - 4p - 3q^2$
C. $p^2 + 2pq - 3q^2 - 4p$
D. $p^2 + 2pq + 5q^2 - 4p$

10. [11-12 Final Exam Q4]

What is the coefficient of x^2 in the expansion of $(2x+1)(1-3x)$?

A. -6 **B.** -1

C. 2 **D.** 6

11. [11-12 Standardized Test 1, 9]

If $x=-2$ and $y=3$, find the value of $(y-2x)^2$.

A. 1

B. 16

C. 49

D. 64

12. [12-13 Mid-year 4]

The degree of the polynomial $5a^3+6a^4-8a^3b^3-1$ is

A. 3. **B.** 4.

C. 6. **D.** 7.

13. [12-13 Mid-year 5]

Which of the following is a monomial?

A. $3x$ **B.** $\frac{3}{x}$

C. 3^x **D.** $3+x$

14. [12-13 Mid-year 13]

In the expression $x\times 3-9y\div 2+9+8y^2$, which of the following is true?

	Number of terms	Coefficient of y	Constant term
A.	4	–9	11
B.	4	–4.5	9
C.	6	–4.5	3
D.	6	4.5	9

15. **[12-13 Mid-year 14]**

$-x-(x+1)(x^2+3)=$

A. $-x^3+3x-3.$

B. $-x^3-x^2-4x-3.$

C. $-x^3+x^2+6x-3.$

D. $-x^3-x^2-6x-3.$

16. **[12-13 Mid-year 12]**
Which of the following is correct?

A. $-2^4 = -8$
B. $-(-2)^5 = -32$
C. $2^2 \times 3^2 = 6^2$
D. $(-3)^4 = -3 \times 3 \times 3 \times 3$

17. **[12-13 Final Exam Q16]**
After expanding $(4a^2 - b + 5)(-a + 2)$, which of the following is true for the polynomial obtained?

	Degree	Number of terms
A.	2	5
B.	2	6
C.	3	5
D.	3	6

18. **[13-14 Mid-year Exam]**
Which of the following is a monomial?

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

19. **[13-14 Mid-year Exam]**
In the expression $a \times a \times 3 \div 2 - 5 + 3ab$, which of the following is <u>not</u> 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.

20. **[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.** $x = a$

21. **[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. $(x-3)(y+1)$

22. **[14-15 Mid-year Exam]**
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

23. **[14-15 Mid-year Exam]**
Which of the following about the polynomial $(x-2)(x^2+x+3)$ is true?

	Degree	Constant Term
A.	2	-6
B.	2	-2
C.	3	-6
D.	3	-2

24. **[14-15 Mid-year Exam]**
$2^{3k-3} \div 2^{k-1} =$

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

25. **[14-15 Mid-year Exam]**
$c \cdot c \cdot c\,(2c + c) =$

A. $3c^4$ **B.** $2c^5$
C. $3c^5$ **D.** $2c^6$

26. **[14-15 Mid-year Exam]**
Consider the polynomial $4x^4 - 4xy^3 + 4x^2y^3$. Which of the following is true?

	Degree	Coefficient of xy^3
A.	4	–4
B.	4	4
C.	5	–4
D.	5	4

27. [14-15 Mid-year Exam]

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

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

28. [15-16 Mid-year Exam]

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

29. [15-16 Mid-year Exam]

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. $x-3y+5z$

30. [15-16 Mid-year Exam]

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

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

31. [15-16 Mid-year Exam]

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

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

32. [15-16 Mid-year Exam]

Which of the following expressions **CANNOT** be factorized?

I. $ab + bc + ac$
II. $1 + x + x^2 + x^3$
III. $a(x + y) - b(x - y)$

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

33. [15-16 Mid-year Exam]

Factorize $x^2 + 2x + 1$.

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

34. [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. $-x^2 + 3x - 1$

35. [15-16 Final Exam, #13]

Factorize $ax - 1 + x - a$.

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

~ End ~