

Algebra (Introduction)

MCQ Test, Set 06

Time: 30 minutes

Maximum marks: 25

Name: _____ Class: _____ Date: _____

- There are 25 questions. Each has exactly one correct answer: choose A, B, C or D.
- Each correct answer carries 1 mark. There is no negative marking.
- The key sheet and worked solutions are at the end of this test.

1. Which of m , 7, 18 and $-\frac{8}{9}$ is a variable?**A.** m **B.** 7**C.** 18**D.** $-\frac{8}{9}$ 2. Which of z , $\frac{2}{3}$, n and m is a constant?**A.** z **B.** $\frac{2}{3}$ **C.** n **D.** m 3. The sum of t and a is**A.** $a - t$ **B.** $t - a$ **C.** ta **D.** $t + a$ 4. The subtraction of 6 from y is**A.** $y + 6$ **B.** $-6y$ **C.** $y - 6$ **D.** $6 - y$ 5. The symbolic form of 'the subtraction of $7z$ from 28' is**A.** $28 + 7z$ **B.** $28 - 7z$ **C.** $21z$ **D.** $7z - 28$ 6. The symbolic form of 'divide n by 6' is**A.** $n - 6$ **B.** $\frac{n}{6}$ **C.** $6n$ **D.** $\frac{6}{n}$ 7. The symbolic form of 'one third of b ' is**A.** $3b$ **B.** $b - 3$ **C.** $\frac{b}{3}$ **D.** $\frac{3}{b}$ 8. The symbolic form of '3 less than half of y ' is**A.** $\frac{y}{2} - 3$ **B.** $\frac{y}{2} + 3$ **C.** $\frac{y-3}{2}$ **D.** $3 - \frac{y}{2}$ 9. $1 \times mnq =$ **A.** 0**B.** mnq **C.** $-mnq$ **D.** 110. $-1 \times m =$ **A.** m **B.** -1 **C.** 0**D.** $-m$ 11. Which of $c + x$, $2 - c$, $a + 12$ and $-9yz$ is a term?**A.** $c + x$ **B.** $2 - c$ **C.** $a + 12$ **D.** $-9yz$

12. In a product, each of the literal (or) numerical values is called a
A. factor **B.** like term **C.** constant **D.** term
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13. The factors of $-14xz$ are
A. $14, x, z$ **B.** x, z only **C.** $-14, x, z$ **D.** -14 only
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14. The coefficient of pqr in $-15pqr$ is
A. $-15pqr$ **B.** 15 **C.** pqr **D.** -15
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15. In $17mn$, 17 is the coefficient of
A. n **B.** $17mn$ **C.** m **D.** mn
-
16. The coefficient of b in $-\frac{b}{11}$ is
A. $\frac{1}{11}$ **B.** $-\frac{1}{11}$ **C.** -11 **D.** 11
-
17. The coefficient of xz in $\frac{xz}{4}$ is
A. 0 **B.** 1 **C.** $\frac{1}{4}$ **D.** 4
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18. Which of the following is a like term of $7pqt$?
A. $7pq$ **B.** $-12pqt$ **C.** $7qtx$ **D.** 7
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19. Which of the following is not a like term of $2t$?
A. $-4t$ **B.** $-5t$ **C.** 2 **D.** $4t$
-
20. The sum of $21y$ and $10y$ is
A. $31y$ **B.** 31 **C.** $210y$ **D.** $-11y$
-
21. $15ab + 6ab =$
A. $9ab$ **B.** $90ab$ **C.** 21 **D.** $21ab$
-
22. $4x + 7 + 20x + 3 =$
A. $34x$ **B.** $11x + 23$ **C.** $24x + 10$ **D.** $10x + 24$
-
23. $-28r - 19r =$
A. $-9r$ **B.** $-47r$ **C.** $47r$ **D.** $9r$
-
24. $14r - 25r =$
A. $-11r$ **B.** $39r$ **C.** $-39r$ **D.** $11r$
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25. $8ac - 10 - 20 - 7ac =$
A. $ac - 30$ **B.** $-ac - 30$ **C.** $-29ac$ **D.** $ac + 30$
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Key sheet

1. A	2. B	3. D	4. C	5. B
6. B	7. C	8. A	9. B	10. D
11. D	12. A	13. C	14. D	15. D
16. B	17. C	18. B	19. C	20. A
21. D	22. C	23. B	24. A	25. A

Solutions

1. Which of m , 7, 18 and $-\frac{8}{9}$ is a variable?

m can take various numerical values, so it is a variable.

7, 18 and $-\frac{8}{9}$ have fixed values: they are constants.

Ans: (A) m

2. Which of z , $\frac{2}{3}$, n and m is a constant?

$\frac{2}{3}$ has a fixed value, so it is a constant.

z , n and m can take various values: they are variables.

Ans: (B) $\frac{2}{3}$

3. The sum of t and a is

Sum means add.

$$t + a$$

Ans: (D) $t + a$

4. The subtraction of 6 from y is

Take 6 away from y .

$$y - 6$$

Ans: (C) $y - 6$

5. The symbolic form of 'the subtraction of $7z$ from 28' is

Take $7z$ away from 28.

$$28 - 7z$$

Ans: (B) $28 - 7z$

6. The symbolic form of 'divide n by 6' is

n divided by 6 is $\frac{n}{6}$

Ans: (B) $\frac{n}{6}$

7. The symbolic form of 'one third of b ' is

One third of b is $\frac{b}{3}$

Ans: (C) $\frac{b}{3}$

8. The symbolic form of '3 less than half of y ' is

Half of y is $\frac{y}{2}$.

3 less than it: take away 3.

$$\frac{y}{2} - 3$$

Ans: (A) $\frac{y}{2} - 3$

9. $1 \times mnq =$

Rule: $1 \times a = a$

$1 \times mnq = mnq$

Ans: (B) mnq

10. $-1 \times m =$

Rule: $-1 \times a = -a$

$-1 \times m = -m$

Ans: (D) $-m$

11. Which of $c + x$, $2 - c$, $a + 12$ and $-9yz$ is a term?

A term is made by multiplication (or) division only; the others use $+$ (or) $-$.

So $-9yz$ is a term.

Ans: (D) $-9yz$

12. In a product, each of the literal (or) numerical values is called a

E.g. $7ab = 7 \times a \times b$; 7 , a , b are the factors of $7ab$.

Ans: (A) factor

13. The factors of $-14xz$ are

$-14xz = -14 \times x \times z$

So the factors are -14 , x , z (the sign stays with the number).

Ans: (C) -14 , x , z

14. The coefficient of pqr in $-15pqr$ is

$-15pqr = -15 \times pqr$

So the coefficient of pqr is -15 .

Ans: (D) -15

15. In $17mn$, 17 is the coefficient of

$17mn = 17 \times mn$

So 17 is the coefficient of mn .

Ans: (D) mn

16. The coefficient of b in $-\frac{b}{11}$ is

$-\frac{b}{11} = -\frac{1}{11} \times b$

So the coefficient of b is $-\frac{1}{11}$.

Ans: (B) $-\frac{1}{11}$

17. The coefficient of xz in $\frac{xz}{4}$ is

$\frac{xz}{4} = \frac{1}{4} \times xz$

So the coefficient of xz is $\frac{1}{4}$.

Ans: (C) $\frac{1}{4}$

18. Which of the following is a like term of $7pqt$?

Like terms have the same literal factors pqt .

$7pqt$, $-12pqt$: the same literal factors pqt , so like terms.

Ans: (B) $-12pqt$

19. Which of the following is not a like term of $2t$?

Like terms have the same literal factors t .

$2t$ has literal factors t , 2 has no literal factor: different, so unlike terms.

Ans: (C) 2

20. The sum of $21y$ and $10y$ is

$$21y + 10y = (21 + 10)y$$

$$= 31y$$

Ans: (A) $31y$

21. $15ab + 6ab =$

$$15ab + 6ab = (15 + 6)ab$$

$$= 21ab$$

Ans: (D) $21ab$

22. $4x + 7 + 20x + 3 =$

$$4x + 7 + 20x + 3 = (4x + 20x) + (7 + 3)$$

$$= (4 + 20)x + (7 + 3)$$

$$= 24x + 10$$

Ans: (C) $24x + 10$

23. $-28r - 19r =$

$$-28r - 19r = (-28 - 19)r = -47r$$

Signs same: add and keep the sign: $-28 - 19 = -47$

Ans: (B) $-47r$

24. $14r - 25r =$

$$14r - 25r = (14 - 25)r = -11r$$

Signs different: subtract and keep the sign of the bigger: $14 - 25 = -11$

Ans: (A) $-11r$

25. $8ac - 10 - 20 - 7ac =$

$$8ac - 10 - 20 - 7ac = (8ac - 7ac) + (-10 - 20)$$

$$= (8 - 7)ac + (-10 - 20)$$

$$= ac - 30$$

Ans: (A) $ac - 30$
