

Algebra (Introduction)**MCQ Test, Set 07**

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.

- Which of $-\frac{8}{9}$, x , $\frac{1}{7}$ and -28 is a variable?
A. $-\frac{8}{9}$ **B.** x **C.** $\frac{1}{7}$ **D.** -28
- Which of x , y , -29 and r is a constant?
A. x **B.** y **C.** -29 **D.** r
- The product of 15 and y is
A. $y + 15$ **B.** $15y$ **C.** $\frac{15}{y}$ **D.** $\frac{y}{15}$
- The subtraction of 4 from 58 is
A. 54 **B.** -54 **C.** 62 **D.** -62
- The symbolic form of '53 more than t ' is
A. $53 - t$ **B.** $t + 53$ **C.** $53t$ **D.** $t - 53$
- The symbolic form of ' n decreased by 54' is
A. $n - 54$ **B.** $n + 54$ **C.** $-54n$ **D.** $54 - n$
- The symbolic form of 'half of c ' is
A. $c - 2$ **B.** $2c$ **C.** $\frac{2}{c}$ **D.** $\frac{c}{2}$
- The symbolic form of 'one third of a ' is
A. $3a$ **B.** $\frac{3}{a}$ **C.** $\frac{a}{3}$ **D.** $a - 3$
- $\frac{mn}{1} =$
A. mn **B.** 0 **C.** $\frac{1}{mn}$ **D.** 1
- $\frac{mpq}{-1} =$
A. -1 **B.** $\frac{-1}{mpq}$ **C.** mpq **D.** $-mpq$
- The terms of $14m - 9 + 8z$ are
A. $14m$, -9 , $8z$ **B.** $14m$ and -9 only
C. $14m - 9$ and $8z$ **D.** $14m$, 9 , $8z$

12. Which of the following is not a way of writing 52 as a product of two factors?
A. 6×9 **B.** 4×13 **C.** 1×52 **D.** 2×26
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13. Which of the following is not a factor of $5mnp$?
A. p **B.** n **C.** m **D.** t
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14. In a product of two (or) more factors, each factor is called the ____ of the product of the other factors.
A. constant **B.** term **C.** variable **D.** coefficient
-
15. In $14np$, 14 is the coefficient of
A. $14np$ **B.** np **C.** p **D.** n
-
16. The coefficient of mn in $\frac{mn}{9}$ is
A. 0 **B.** 1 **C.** $\frac{1}{9}$ **D.** 9
-
17. The coefficient of ab in $-\frac{ab}{3}$ is
A. $-\frac{1}{3}$ **B.** 3 **C.** -3 **D.** $\frac{1}{3}$
-
18. Which of the following is a like term of $-2xy$?
A. $-2x$ **B.** $-2xz$ **C.** $6xy$ **D.** -2
-
19. Which of the following is not a like term of $-5ab$?
A. $10ba$ **B.** $-11ab$ **C.** $11abm$ **D.** $-9ab$
-
20. $27bc + 14bc =$
A. $378bc$ **B.** 41 **C.** $13bc$ **D.** $41bc$
-
21. $11n + 5n + 7n =$
A. 23 **B.** $16n$ **C.** $23n$ **D.** $12n$
-
22. $14np + 14n + 8np + 5n =$
A. $41nnp$ **B.** $19np + 22n$ **C.** $28np + 13n$ **D.** $22np + 19n$
-
23. $-27n + 10n =$
A. $17n$ **B.** $-17n$ **C.** $37n$ **D.** $-37n$
-
24. $-4n - 6n =$
A. $2n$ **B.** $10n$ **C.** $-10n$ **D.** $-2n$
-
25. $17q - 7xz - 12q + 3xz =$
A. $5q + 4xz$ **B.** $5q - 4xz$ **C.** $-5q - 4xz$ **D.** $29q - 4xz$
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Key sheet

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

Solutions

1. Which of $-\frac{8}{9}$, x , $\frac{1}{7}$ and -28 is a variable?

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

$-\frac{8}{9}$, $\frac{1}{7}$ and -28 have fixed values: they are constants.

Ans: (B) x

2. Which of x , y , -29 and r is a constant?

-29 has a fixed value, so it is a constant.

x , y and r can take various values: they are variables.

Ans: (C) -29

3. The product of 15 and y is

Multiply: $15 \times y = 15y$

Ans: (B) $15y$

4. The subtraction of 4 from 58 is

Take 4 away from 58.

$$58 - 4 = 54$$

Ans: (A) 54

5. The symbolic form of '53 more than t ' is

53 more than t : add 53 to t .

$$t + 53$$

Ans: (B) $t + 53$

6. The symbolic form of ' n decreased by 54' is

Take 54 away from n .

$$n - 54$$

Ans: (A) $n - 54$

7. The symbolic form of 'half of c ' is

Half of c is $\frac{c}{2}$

Ans: (D) $\frac{c}{2}$

8. The symbolic form of 'one third of a ' is

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

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

9. $\frac{mn}{1} =$

Rule: $\frac{a}{1} = a$

$$\frac{mn}{1} = mn$$

Ans: (A) mn

10. $\frac{mpq}{-1} =$

Rule: $\frac{a}{-1} = -a$

$\frac{mpq}{-1} = -mpq$

Ans: (D) $-mpq$

11. The terms of $14m - 9 + 8z$ are

Each term keeps the sign in front of it.

The terms are $14m$, -9 and $8z$.

Ans: (A) $14m$, -9 , $8z$

12. Which of the following is not a way of writing 52 as a product of two factors?

$4 \times 13 = 52$, $1 \times 52 = 52$, $2 \times 26 = 52$

$6 \times 9 = 54 \neq 52$

Ans: (A) 6×9

13. Which of the following is not a factor of $5mnp$?

$5mnp = 5 \times m \times n \times p$

t is not in this product, so it is not a factor.

Ans: (D) t

14. In a product of two (or) more factors, each factor is called the ____ of the product of the other factors.

E.g. in $9y$, 9 is the coefficient of y .

Ans: (D) coefficient

15. In $14np$, 14 is the coefficient of

$14np = 14 \times np$

So 14 is the coefficient of np .

Ans: (B) np

16. The coefficient of mn in $\frac{mn}{9}$ is

$\frac{mn}{9} = \frac{1}{9} \times mn$

So the coefficient of mn is $\frac{1}{9}$.

Ans: (C) $\frac{1}{9}$

17. The coefficient of ab in $-\frac{ab}{3}$ is

$-\frac{ab}{3} = -\frac{1}{3} \times ab$

So the coefficient of ab is $-\frac{1}{3}$.

Ans: (A) $-\frac{1}{3}$

18. Which of the following is a like term of $-2xy$?

Like terms have the same literal factors xy .

$-2xy$, $6xy$: the same literal factors xy , so like terms.

Ans: (C) $6xy$

19. Which of the following is not a like term of $-5ab$?

Like terms have the same literal factors ab .

$-5ab$ has literal factors ab , $11abm$ has literal factors abm : different, so unlike terms.

Ans: (C) $11abm$

20. $27bc + 14bc =$

$$27bc + 14bc = (27 + 14)bc$$

$$= 41bc$$

Ans: (D) $41bc$

21. $11n + 5n + 7n =$

$$11n + 5n + 7n = (11 + 5 + 7)n$$

$$= 23n$$

Ans: (C) $23n$

22. $14np + 14n + 8np + 5n =$

$$14np + 14n + 8np + 5n = (14np + 8np) + (14n + 5n)$$

$$= (14 + 8)np + (14 + 5)n$$

$$= 22np + 19n$$

Ans: (D) $22np + 19n$

23. $-27n + 10n =$

$$-27n + 10n = (-27 + 10)n = -17n$$

Signs different: subtract and keep the sign of the bigger: $-27 + 10 = -17$

Ans: (B) $-17n$

24. $-4n - 6n =$

$$-4n - 6n = (-4 - 6)n = -10n$$

Signs same: add and keep the sign: $-4 - 6 = -10$

Ans: (C) $-10n$

25. $17q - 7xz - 12q + 3xz =$

$$17q - 7xz - 12q + 3xz = (17q - 12q) + (-7xz + 3xz)$$

$$= (17 - 12)q + (-7 + 3)xz$$

$$= 5q - 4xz$$

Ans: (B) $5q - 4xz$
