

Algebra (Introduction)

MCQ Test, Set 04

Time: 30 minutes

Maximum marks: 25

Name: _____ Class: _____ Date: _____

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

1. A variable is also called a

- A.** constant **B.** like term **C.** coefficient **D.** literal

2. Which of -3 , a , x and z is a constant?

- A.** -3 **B.** a **C.** x **D.** z

3. The subtraction of 13 from 18 is

- A.** 31 **B.** 5 **C.** -5 **D.** -31

4. $-8 \times q =$

- A.** $-8 + q$ **B.** $8q$ **C.** $-8q$ **D.** $q + 8$

5. The symbolic form of 'the subtraction of $8y$ from 7' is

- A.** $7 - 8y$ **B.** $7 + 8y$ **C.** $-y$ **D.** $8y - 7$

6. The symbolic form of '19 times b ' is

- A.** $\frac{b}{19}$ **B.** $19b$ **C.** $\frac{19}{b}$ **D.** $b + 19$

7. The symbolic form of '12 more than half of m ' is

- A.** $\frac{m}{2} + 12$ **B.** $\frac{m+12}{2}$ **C.** $\frac{m}{2} - 12$ **D.** $2m + 12$

8. The symbolic form of '7 less than one third of b ' is

- A.** $\frac{b-7}{3}$ **B.** $\frac{b}{3} + 7$ **C.** $7 - \frac{b}{3}$ **D.** $\frac{b}{3} - 7$

9. $\frac{t}{-1} =$

- A.** -1 **B.** t **C.** $-t$ **D.** $\frac{-1}{t}$

10. $0 \times r =$

- A.** 0 **B.** 1 **C.** $-r$ **D.** r

11. Which of $-5t$, $13 - r$, 17 and $10ac$ is not a term?

- A.** $-5t$ **B.** $13 - r$ **C.** 17 **D.** $10ac$

12. Which of the following is not a factor of $10mp$?
A. 10 **B.** m **C.** p **D.** t
-
13. The factors of $-12np$ are
A. n, p only **B.** $12, n, p$ **C.** $-12, n, p$ **D.** -12 only
-
14. The coefficient of q in $14qrt$ is
A. $14q$ **B.** 14 **C.** $14rt$ **D.** rt
-
15. The coefficient of mp in $-5mp$ is
A. 5 **B.** -5 **C.** $-5mp$ **D.** mp
-
16. The coefficient of pq in $\frac{pq}{7}$ is
A. $\frac{1}{7}$ **B.** 7 **C.** 1 **D.** 0
-
17. The coefficient of yz in $-\frac{yz}{6}$ is
A. $-\frac{1}{6}$ **B.** -6 **C.** $\frac{1}{6}$ **D.** 6
-
18. Which of the following is a like term of $-14t$?
A. $-14r$ **B.** $-14rt$ **C.** -14 **D.** $9t$
-
19. Which of the following is not a like term of $5pqr$?
A. $-3pqr$ **B.** $-10pqr$ **C.** $-4pqr$ **D.** 5
-
20. $13x + 6x =$
A. 19 **B.** $78x$ **C.** $19x$ **D.** $7x$
-
21. $9ac + 3ac + 5ac =$
A. $12ac$ **B.** 17 **C.** $17ac$ **D.** $8ac$
-
22. $7ac + 8 + 14ac + 8 =$
A. $16ac + 21$ **B.** $15ac + 22$ **C.** $37ac$ **D.** $21ac + 16$
-
23. $-17xz + 24xz =$
A. $-41xz$ **B.** $7xz$ **C.** $41xz$ **D.** $-7xz$
-
24. $12b - 2b =$
A. $10b$ **B.** $-10b$ **C.** $-14b$ **D.** $14b$
-
25. $6ac - 18 - 14ac + 6 =$
A. $8ac - 12$ **B.** $-8ac - 12$ **C.** $-8ac + 12$ **D.** $-20ac$
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Key sheet

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

Solutions

1. A variable is also called a

A variable is also called a literal.

Ans: (D) literal

2. Which of -3 , a , x and z is a constant?

-3 has a fixed value, so it is a constant.

a , x and z can take various values: they are variables.

Ans: (A) -3

3. The subtraction of 13 from 18 is

Take 13 away from 18.

$$18 - 13 = 5$$

Ans: (B) 5

4. $-8 \times q =$

$$-8 \times q = -8q$$

Write the number first, then the letter.

Ans: (C) $-8q$

5. The symbolic form of 'the subtraction of $8y$ from 7' is

Take $8y$ away from 7.

$$7 - 8y$$

Ans: (A) $7 - 8y$

6. The symbolic form of '19 times b ' is

$$\text{Multiply: } 19 \times b = 19b$$

Ans: (B) $19b$

7. The symbolic form of '12 more than half of m ' is

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

12 more than it: add 12.

$$\frac{m}{2} + 12$$

Ans: (A) $\frac{m}{2} + 12$

8. The symbolic form of '7 less than one third of b ' is

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

7 less than it: take away 7.

$$\frac{b}{3} - 7$$

Ans: (D) $\frac{b}{3} - 7$

9. $\frac{t}{-1} =$

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

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

Ans: (C) $-t$

10. $0 \times r =$

Rule: $0 \times a = 0$

$$0 \times r = 0$$

Ans: (A) 0

11. Which of $-5t$, $13 - r$, 17 and $10ac$ is not a term?

A term is made by multiplication (or) division only.

$13 - r$ joins two terms with a $-$ sign, so it is not a term.

Ans: (B) $13 - r$

12. Which of the following is not a factor of $10mp$?

$$10mp = 10 \times m \times p$$

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

Ans: (D) t

13. The factors of $-12np$ are

$$-12np = -12 \times n \times p$$

So the factors are $-12, n, p$ (the sign stays with the number).

Ans: (C) $-12, n, p$

14. The coefficient of q in $14qrt$ is

$$14qrt = 14rt \times q$$

So the coefficient of q is $14rt$.

Ans: (C) $14rt$

15. The coefficient of mp in $-5mp$ is

$$-5mp = -5 \times mp$$

So the coefficient of mp is -5 .

Ans: (B) -5

16. The coefficient of pq in $\frac{pq}{7}$ is

$$\frac{pq}{7} = \frac{1}{7} \times pq$$

So the coefficient of pq is $\frac{1}{7}$.

Ans: (A) $\frac{1}{7}$

17. The coefficient of yz in $-\frac{yz}{6}$ is

$$-\frac{yz}{6} = -\frac{1}{6} \times yz$$

So the coefficient of yz is $-\frac{1}{6}$.

Ans: (A) $-\frac{1}{6}$

18. Which of the following is a like term of $-14t$?

Like terms have the same literal factors t .

$-14t$, $9t$: the same literal factors t , so like terms.

Ans: (D) $9t$

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

Like terms have the same literal factors pqr .

$5pqr$ has literal factors pqr , 5 has no literal factor: different, so unlike terms.

Ans: (D) 5

20. $13x + 6x =$

$$13x + 6x = (13 + 6)x$$

$$= 19x$$

Ans: (C) $19x$

21. $9ac + 3ac + 5ac =$

$$9ac + 3ac + 5ac = (9 + 3 + 5)ac$$

$$= 17ac$$

Ans: (C) $17ac$

22. $7ac + 8 + 14ac + 8 =$

$$7ac + 8 + 14ac + 8 = (7ac + 14ac) + (8 + 8)$$

$$= (7 + 14)ac + (8 + 8)$$

$$= 21ac + 16$$

Ans: (D) $21ac + 16$

23. $-17xz + 24xz =$

$$-17xz + 24xz = (-17 + 24)xz = 7xz$$

Signs different: subtract and keep the sign of the bigger: $-17 + 24 = 7$

Ans: (B) $7xz$

24. $12b - 2b =$

$$12b - 2b = (12 - 2)b = 10b$$

Signs different: subtract and keep the sign of the bigger: $12 - 2 = 10$

Ans: (A) $10b$

25. $6ac - 18 - 14ac + 6 =$

$$6ac - 18 - 14ac + 6 = (6ac - 14ac) + (-18 + 6)$$

$$= (6 - 14)ac + (-18 + 6)$$

$$= -8ac - 12$$

Ans: (B) $-8ac - 12$
