

Algebra (Introduction)

MCQ Test, Set 10

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 18, z , -17 and -20 is a variable?**A.** 18**B.** z **C.** -17 **D.** -20 2. Which of $\frac{5}{6}$, y , c and b is a constant?**A.** $\frac{5}{6}$ **B.** y **C.** c **D.** b 3. The sum of x and 56 is**A.** $56 - x$ **B.** $x - 56$ **C.** $x + 56$ **D.** $56x$ 4. The subtraction of 48 from t is**A.** $48 - t$ **B.** $t + 48$ **C.** $-48t$ **D.** $t - 48$ 5. The symbolic form of '56 divided by p ' is**A.** $56 - p$ **B.** $\frac{56}{p}$ **C.** $\frac{p}{56}$ **D.** $56p$ 6. The symbolic form of '10 times p added to 6 times y ' is**A.** $6y - 10p$ **B.** $16py$ **C.** $60py$ **D.** $6y + 10p$ 7. The symbolic form of '15 more than half of x ' is**A.** $\frac{x+15}{2}$ **B.** $\frac{x}{2} - 15$ **C.** $2x + 15$ **D.** $\frac{x}{2} + 15$ 8. The symbolic form of '6 less than one third of p ' is**A.** $\frac{p}{3} + 6$ **B.** $\frac{p}{3} - 6$ **C.** $\frac{p-6}{3}$ **D.** $6 - \frac{p}{3}$ 9. $1 \times pqr =$ **A.** pqr **B.** $-pqr$ **C.** 0**D.** 110. $-1 \times mn =$ **A.** mn **B.** -1 **C.** 0**D.** $-mn$ 11. The terms of $3y + 7 - 6a$ are**A.** $3y$, 7, $6a$ **B.** $3y$, 7, $-6a$ **C.** $3y$ and 7 only**D.** $3y + 7$ and $-6a$

12. Which of the following is not a way of writing 64 as a product of two factors?
A. 4×16 **B.** 1×64 **C.** 9×7 **D.** 2×32
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13. The factors of $-3ab$ are
A. $3, a, b$ **B.** a, b only **C.** $-3, a, b$ **D.** -3 only
-
14. In $12bc$, $12c$ is the coefficient of
A. b **B.** bc **C.** c **D.** $12bc$
-
15. The coefficient of pqt in $23pqt$ is
A. $23pqt$ **B.** pqt **C.** -23 **D.** 23
-
16. The coefficient of xy in $-\frac{xy}{8}$ is
A. -8 **B.** 8 **C.** $-\frac{1}{8}$ **D.** $\frac{1}{8}$
-
17. The coefficient of n in $\frac{n}{3}$ is
A. 3 **B.** $\frac{1}{3}$ **C.** 1 **D.** 0
-
18. Which of the following is a like term of $-7p$?
A. $-7y$ **B.** -7 **C.** $-7mp$ **D.** $-2p$
-
19. Which of the following is not a like term of $4mp$?
A. $\frac{13}{5}mp$ **B.** $-\frac{3}{2}mp$ **C.** 4 **D.** $-11mp$
-
20. $10xz + 18xz =$
A. $28xz$ **B.** $8xz$ **C.** $180xz$ **D.** 28
-
21. $15yz + 4yz + 13yz =$
A. $32yz$ **B.** $19yz$ **C.** 32 **D.** $17yz$
-
22. $7pr + 10 + 8pr + 2 =$
A. $17pr + 10$ **B.** $15pr + 12$ **C.** $27pr$ **D.** $12pr + 15$
-
23. $-25y + 26y =$
A. y **B.** $51y$ **C.** $-51y$ **D.** $-y$
-
24. $24bc - 11bc =$
A. $-13bc$ **B.** $13bc$ **C.** $35bc$ **D.** $-35bc$
-
25. $8 - 10yz + 18 + 4yz =$
A. $6yz + 26$ **B.** $-6yz - 26$ **C.** $-6yz + 26$ **D.** $20yz$
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Key sheet

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

Solutions

1. Which of 18, z , -17 and -20 is a variable?

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

18, -17 and -20 have fixed values: they are constants.

Ans: (B) z

2. Which of $\frac{5}{6}$, y , c and b is a constant?

$\frac{5}{6}$ has a fixed value, so it is a constant.

y , c and b can take various values: they are variables.

Ans: (A) $\frac{5}{6}$

3. The sum of x and 56 is

Sum means add.

$$x + 56$$

Ans: (C) $x + 56$

4. The subtraction of 48 from t is

Take 48 away from t .

$$t - 48$$

Ans: (D) $t - 48$

5. The symbolic form of '56 divided by p ' is

56 divided by p is $\frac{56}{p}$

Ans: (B) $\frac{56}{p}$

6. The symbolic form of '10 times p added to 6 times y ' is

10 times p is $10p$; 6 times y is $6y$.

Add $10p$ to $6y$: $6y + 10p$

Ans: (D) $6y + 10p$

7. The symbolic form of '15 more than half of x ' is

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

15 more than it: add 15.

$$\frac{x}{2} + 15$$

Ans: (D) $\frac{x}{2} + 15$

8. The symbolic form of '6 less than one third of p ' is

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

6 less than it: take away 6.

$$\frac{p}{3} - 6$$

Ans: (B) $\frac{p}{3} - 6$

9. $1 \times pqr =$

Rule: $1 \times a = a$

$1 \times pqr = pqr$

Ans: (A) pqr

10. $-1 \times mn =$

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

$-1 \times mn = -mn$

Ans: (D) $-mn$

11. The terms of $3y + 7 - 6a$ are

Each term keeps the sign in front of it.

The terms are $3y$, 7 and $-6a$.

Ans: (B) $3y, 7, -6a$

12. Which of the following is not a way of writing 64 as a product of two factors?

$2 \times 32 = 64, 1 \times 64 = 64, 4 \times 16 = 64$

$9 \times 7 = 63 \neq 64$

Ans: (C) 9×7

13. The factors of $-3ab$ are

$-3ab = -3 \times a \times b$

So the factors are $-3, a, b$ (the sign stays with the number).

Ans: (C) $-3, a, b$

14. In $12bc$, $12c$ is the coefficient of

$12bc = 12c \times b$

So $12c$ is the coefficient of b .

Ans: (A) b

15. The coefficient of pqt in $23pqt$ is

$23pqt = 23 \times pqt$

So the coefficient of pqt is 23.

Ans: (D) 23

16. The coefficient of xy in $-\frac{xy}{8}$ is

$-\frac{xy}{8} = -\frac{1}{8} \times xy$

So the coefficient of xy is $-\frac{1}{8}$.

Ans: (C) $-\frac{1}{8}$

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

$$\frac{n}{3} = \frac{1}{3} \times n$$

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

Ans: (B) $\frac{1}{3}$

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

Like terms have the same literal factors p .

$-7p$, $-2p$: the same literal factors p , so like terms.

Ans: (D) $-2p$

19. Which of the following is not a like term of $4mp$?

Like terms have the same literal factors mp .

$4mp$ has literal factors mp , 4 has no literal factor: different, so unlike terms.

Ans: (C) 4

20. $10xz + 18xz =$

$$10xz + 18xz = (10 + 18)xz$$

$$= 28xz$$

Ans: (A) $28xz$

21. $15yz + 4yz + 13yz =$

$$15yz + 4yz + 13yz = (15 + 4 + 13)yz$$

$$= 32yz$$

Ans: (A) $32yz$

22. $7pr + 10 + 8pr + 2 =$

$$7pr + 10 + 8pr + 2 = (7pr + 8pr) + (10 + 2)$$

$$= (7 + 8)pr + (10 + 2)$$

$$= 15pr + 12$$

Ans: (B) $15pr + 12$

23. $-25y + 26y =$

$$-25y + 26y = (-25 + 26)y = y$$

Signs different: subtract and keep the sign of the bigger: $-25 + 26 = 1$

Ans: (A) y

24. $24bc - 11bc =$

$$24bc - 11bc = (24 - 11)bc = 13bc$$

Signs different: subtract and keep the sign of the bigger: $24 - 11 = 13$

Ans: (B) $13bc$

25. $8 - 10yz + 18 + 4yz =$

$$8 - 10yz + 18 + 4yz = (-10yz + 4yz) + (8 + 18)$$

$$= (-10 + 4)yz + (8 + 18)$$

$$= -6yz + 26$$

Ans: (C) $-6yz + 26$
