Ninth Grade - Algebra

1) Given the formula $T = P^2 + (Q/[1 + R])$, Find the value of T when P = -3 , Q = 4 and R = -2

- 8
- 5
- 1
- 10

2) Given the formula $T = P^2 + (Q /[1 + R])$ Find the values of P when T = 13, Q = -24 and R = 1

- 2
- -10
- 9
- ±5

3) Write the algebraic expressions for the following statements a) Divide xyz by 7ab b) Subtract the cube root of x from 4y.

- xyz/7ab,(4y - ³?x)
- xyz/3ab, (5y - ?x)
- yxz/2ab, (x - ??x)
- xyz/2ba,(9y - ?x)

4) Given the formula C = 2(x - y), Find the value of x when y =12 and C = 4

- 5
- 24
- 10
- 14

5) Given that a = -2, b = 1 and c = 5, Evaluate (a) $(a + 2c)(b – 2a)$,(b) $abc/(3a)^2$

- 40,-5/18
- 15,-5/18
- 23,1/8
- 11,-3/11

6) Given that x = 7 and y = -0.4, Evaluate 8x – y

- 56.04
- 34.07
- 14.33
- 6.12

7) Given that x = 7 and y = -0.4, evaluate $2x^2 + 5xy/5y$

- 20
- 12
- -42
- -33

8) Given that a = -2, b = 2 and c = -1, Find the value of 3ab + 4c

- 29
- 25
- 10
- -16

9) Given that a = -2, b = 2 and c = -1, Find the value of $4a^2 – 6c – 5b$

- 20
- 3
- -19
- 12

10) Given that p = 3, q = -1 and r = -2, Evaluate $(pr)^3$

- 201
- 118
- -216
- -85

11) Given that p = 3, q = -1 and r = -2, Evaluate ?[q/(r – p)]

- ?(-2/9)
- ?(1/5)
- ?(-1/5)
- ?(3/5)

12) Given that 2x – y = 4, Find the value of 2x - y - 7

- 2
- 7
- 3
- -3

13) Given that p = 3, q = -4 and r = -2, Find 5p - 2q + r

- 21
- 34
- 15
- 24

14) Given that p = 3, q = -4 and r = -2, Find pr^2?

- 4
- 12
- 7
- 5

15) If a = 2,b = -3 and c = 4, Evaluate [2c - 4b + 5ab]/[(c + a)(c - a)]

- 0
- 2
- 10
- -5/6

16) If a = 2, b = 0 and c = -3, Evaluate (a) ac - 2c + 3abc, (b) $(2ac)^2 - ac^2$

- 12,115
- 1,126
- 2,212
- 0,126

17) Given that p = -2 and q = 5, Find the value of $2pq^2$

- -100
- 85
- 150
- 200

18) Given that a = 2, b = -3, c = 4, Evaluate $a^2 – b^2 – c^2$

- 21
- 11
- 10
- -21

19) Simplify $5a – [a + b – 2(3b + c)]$

- 2a + 13b + c
- 9a + 25b + 5c
- 4a - 5b - 2c
- 4a + 5b + 2c

20) Expand and Simplify $5(3 + 2y) - 8(4 - y)$

- 11y - 21
- 4y - 10
- 18y + 17
- 18y - 17

21) Simplify $7(x – 5y) – 4(y – 3x) – (2x – 5y)$

- 21(3x – 5y)
- 17(x – 2y)
- 17(x + 2)y
- 7(5x – y)

22) Simplify $3x + 4[2x + y – (4x - y)$

- -5x + 8y
- -15x + 18y
- 15x + 5y
- 15x - 8y

23) Simplify $2[3p – 2(p – 2q)]$

- 5(3p + 12q)
- 2(p + 2q)

- 3(2p + q)
- 2(p - q)

24) Simplify 5a – [3(2a - 3) – 4b] + 9b + 15

- 24 – a - 13b
- 5 – 2a + 3b
- 24 – a + 13b
- 14 + a - 13b

25) Simplify ([3/5]x^2) ([1/2]x^2)

- (3/10)x?
- (5/13)x?
- (1/8)x?
- (1/19)x?

26) 800 grams of flour costs $x. Find an expression for the cost of y kilograms of flour.

- (15xy)/14
- (5y)/4
- (xy)/24
- (5xy)/4

27) On the first day of school, John cycled 1 mile in x minutes. On his second day, he cycled for y hours at the same average speed as on his first day to school. Write down, the number of miles he cycled on the second day. Leave your answer in terms of x and y.

- 15/x miles, 29y/x miles
- 20/x miles, 10y/x miles
- 10/x miles, 35y/x miles
- 60/x miles, 60y/x miles

28) Mary bought m dozens of apples at r cents per dozen. She sold them at p cents each. Find an expression, in terms of m, r and p, for the percentage profit that she made.

- [66(p + 3r)]/r
- [100(12p - r)]/r
- [121(2p - r)]/r
- [10(p - 5r)]/r

29) Y gallons of milk cost 3 dollars. Find an expression for the number of gallons of milk that can be bought for x dollars.

- (3xy)/13
- (xy)/10
- (xy)/3
- (2xy)/9

30) P pounds of mushrooms cost q cents. Find an expression in terms of p and q, for the number of pounds of mushrooms that can be bought for r dollars.

- 135pr/3q pounds
- 100pr/q pounds
- 5r/q pounds
- 10pr/5q pounds