NEW WUROOD INTERNATIONAL SCHOOL, JEDDAH

B.E.S.T. Group of Schools, K.S.A.
Affiliated to CBSE – New Delhi, Affiliation No. 5730008

Subject: Mathematics

Grade -8   **WORKSHEET-I**

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Block 15: Percentage

1. Hameed bought a piece of land worth ⬜ 3,00,000 and sold for ⬜ 2,40,000. Find his profit or loss in percentage?
2. The Cost of toaster has increased from ⬜ 1250 to ⬜ 1500. What is the percentage of change?
3. Find the sum which becomes ⬜ 40,000 on increasing by 15%?
4. Reema scored 35% marks in her Unit Test I and 50% marks in her Unit Test II. How much percentage should she score in her third Unit Test so that to get 60% marks overall?
5. An A.C is sold at ⬜ 10,050 after allowing the discount of 25%. Find its market price?
6. The cost of 15 pens is equal to selling price of 20 pens. Find the loss or profit percentage?
7. Manjit bought an iron safe for ⬜ 12,160 and paid ⬜ 340 for its transportation, then sold it for ⬜ 12,875. Find his gain in percentage?
8. Wasim bought two cricket bats for ⬜ 840 and ⬜ 360 respectively. He sells the first bat at the gain of 15% and the second one at the loss of 5%. Find his gain or loss percentage in the whole transaction?
9. Sunil purchased books for ⬜ 6400 including 12.5 % VAT. Find the price before VAT was added?
10. Rohini bought Dyson Hair Dryer for ⬜ 40,000 including VAT 15%. Find its price before VAT was added?
11. A man sold two houses for ⬜ 20,00,000 each. On first house, he made profit for 12% and on second profit for 20%. Find his overall profit or loss percent?

BLOCK-17: Algebraic Expression

1. Volume of rectangular box with length = 2ab, breadth = 3ca and height = 2ac is __.

2. Which of the following is not a polynomial?

a) x- 8   b) x^4+2x^3-3x c) $\frac{9}{x^2}$ +4 x -10   d)-4m +2

3. Which of the following is a pair of unlike terms:

a) p^4q^9, -13q $^9p^4m$ b) 100, 270   c) $-9xy^2$, $9x^2y$ d) a^2b^2, $24b^2a^2$

4. Classify the following polynomials as monomials, binomials and trinomials:

    a) $-x^5+25$
    b) g^8+h^7+10j
    c) a^2b-ac
    d) $\frac{x}{y}+1$
    e) -125

5. The degree of the polynomial $10x^5-3x^4+5+6x^3$

    a) 3   b) 5   c) -1   d) 0

6. The numerical coefficient of $\frac{-7x}{2}$

    a) -7   b) 2   c) 0   d) none of these

7. Find the value of expression $3x^2 - 2xy - 40$ if x = -5 and y = 2

a) Simplify $\frac{6x+6}{6}$ = _____

8. Simplify and find the value of the expression 3y(2y – 7) -3(y -4) -63 for y= -2

9. Subtract: $4p^2q-3pq+5pq^2-8p+7q-10$ from $18-3p-11q+5pq-2pq^2+5p^2q$

10. Subtract the sum of $4pq$ and $-5q^2 - 3p^2$ from $5p^2 + 3q^2 - pq$

11. Subtract $7xy + 5x^2 - 7y^2 + 3$ from $7x^2 - 8xy + 3y^2 - 5$.

12. Add: $a - b + ab$, $b - c + bc$, $c - a + ac$

13. Add: $4y(6y^2 + 5y - 8)$ and $3(-y^3 + 2y^2 + 5)$

14. $(p+2q)(3p - 3q + 3r) - (2p - q)r$

15. Simplify the algebraic expression $2(x+7) + 5(-x+4) + 7x$

16. Subtract: $p(p - q)$, $q(q-r)$, $r(r-p)$

17. Subtract the sum of $2x - x^2 + 5$ and $-4x - 3 + 7x^2$ from 5

18. Solve: _____ $+ (13x^2 - 9x + 4) = 17x^2 - 4x - 3$

19. Simplify: $(81p^4 + 9q^3 + 91t + 99) - (0p^4 + 0q^3 + 0t + 0)$

20. Find the expression to be subtracted from $(9x + 6xy - 5y)$ to make it $(-10x - 3xy + 2y)$.

BLOCK 18: Multiplying Expressions

1. The product of $-7x^2 \times -6x^2y^3$
2. Multiply $5p^2(2q - 4p + 9t^2)$
3. $(a - b)^2 =$ _____
4. Find the circumference of the circle if radius of the circle is $3mn$.
5. Simplify the expressions:
   a) $(2a + 3b)(5a - 2a)$
   b) $(2x - 9)(3x^2 + 4x - 9)$
6. Solve by using appropriate identities:
   a) $(9r - s)^2$ b) $(2x + 5)(2x - 5)$ c) $(8t - 7)^2$
7. Solve $42^2 - 39^2$ by using suitable identity.
8. If the dimensions of a box are $(8x - 3)y$, $(3x + 4)y$ and $5x$. Find the surface area of the box?
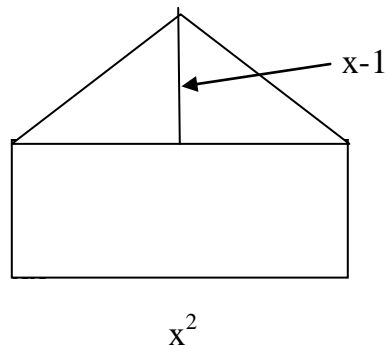
9. Evaluate using appropriate identity

i) 102^2

ii) 194×206

10. Find the area of the given figure:

y +2

x-1

x^2

BLOCK 19: Factorisation of Algebraic expressions

1. Find the common factors in the given expressions: i) $6m^2 + 18mn + 36$

ii) $7p^2q - 9pq^2$

2. factorise using suitbale identitites:

i) $16b^2 + 40b + 25$
ii) $x^2 - 81$

iii) $\dfrac{4}{9} - 36 c^2$

3. Fcatorise using regrouping method:

i) $s^2 + st - sq - tq$

ii) $11\ell^{2} - 11 - \ell^3 + \ell$

4. Factorise:

i) $x(1+ y) + (7+ 7y)$

ii) $(ab - bc) - (a^2 - ac)$

iii) $x^2 + 5x + 6$

iv) $x^2 + 9x - 10$

5.Factorise:

i) $-4z^2 - 24z - 32$

ii) $y^2 - 10y + 21$

iii) $d^2 + 6d - 16$

iv) $4 x^2 y^2 - 16$

v) $4x^2 - 8x - 16$

6. Simplify :

i) $(5a^2 - 4b^2)^2$

ii) $(1 + m)^2 - 4lm$

iii) $9x^2 y^2 - 16$