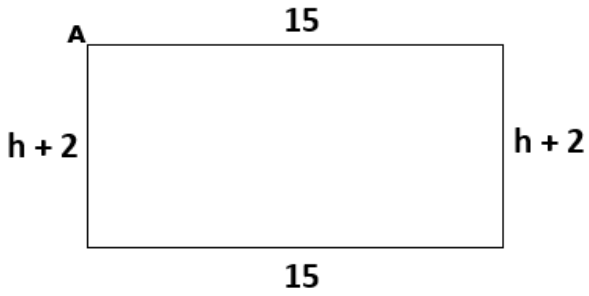
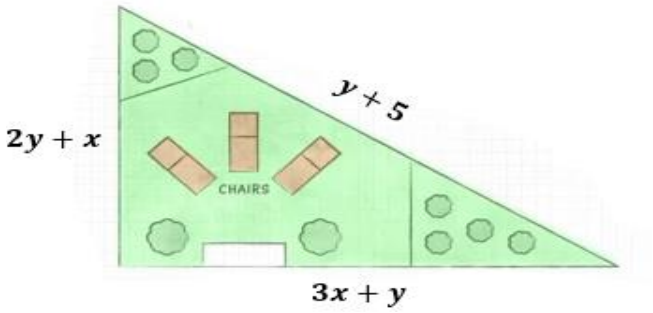
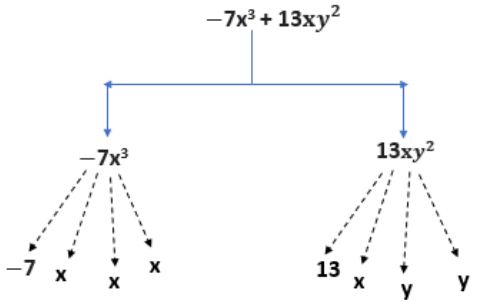
INDIAN SCHOOL AL WADI AL KABIR
Class VII, Mathematics
ALGEBRAIC EXPRESSIONS
Worksheet-1
14-02-2021

OBJECTIVE TYPE (1 Mark)

Q.1.	How many terms are there in the expression $-2p^3 - 3p^2 + 4p + 7$?							
	A	1	**B**	2	**C**	3	**D**	4
Q.2.	Factors of $(-7p^2q^3s)$ are:							
	A	$-7 \times p \times p \times q \times q \times s$	**B**	$-7 \times p \times p \times q \times q \times q \times s$	**C**	$-7 \times p \times q \times q \times s$	**D**	$-7 \times p \times q \times s$
Q.3.	If m = -2, value of $4m^3 + 2m^2 - 10$ is:							
	A	-32	**B**	-34	***C***	40	**D**	30
Q.4.	The constant term in the expression $4p^2q - 3pq^2 + 5$ is:							
	A	0	**B**	4	**C**	5	**D**	-3
Q.5.	What is the coefficient of x in the expression $2 - x + y$?							
	A	2	**B**	1	**C**	-1	**D**	0
Q.6.	$(-xy) - (-5xy)$ is equal to:							
	A	$-6xy$	**B**	$6xy$	**C**	$-4xy$	**D**	$4xy$
Q.7.	The expression for sum of two numbers a and b subtracted from their product is:							
	A	$a + b - ab$	**B**	$ab - (a + b)$	**C**	$ab + a - b$	**D**	$a + b + ab$
Q.8.	Which of the following is a pair of like terms?							
	A	$-5xy, -5y$	**B**	$-5xy, 5x$	**C**	$-5xy, 3yz$	**D**	$-5xy, 7yx$
Q.9.	The perimeter of a triangle whose sides measure 2a, b and a + b is							
	A	$3a + 2b$	**B**	$2a + 2b$	**C**	$a + b + ab$	**D**	$2a + b$
Q.10	Simplify: $z^2 + 11z^2 - 5z - 11z^2 + 5z$							
	A	$z^2 - 10z$	**B**	z^2	**C**	0	**D**	$z^2 + 10z$

Fill in the blanks(1mark)	
Q11.	The coefficient of xy^2 in $-3xy^2$ is _____
Q12.	An algebraic expression with equality sign is called _____
Q13.	Terms with same algebraic factors are called _____ terms.
Q14.	A _____ is a product of factors.
Q15.	The sum of 5pqr, −4pqr and 7pqr is _____
SECTION B (2 marks)	
Q16	Find the sum of $2x^2 - 3y^2$, $6x^2 + 2y^2$ and $-3x^2 - 5y^2$
Q17.	Draw a tree diagram for the expression: $-7x^3 + 13xy^2$
Q18.	Simplify $3(x^2 + 2xy) + 5 - xy - y^2$.
Q19.	Subtract $24xy - 10y - 18x$ from $30xy + 12y - 14x$.
Q20.	Find the value of **t** if the value of $(3x^2 + 5x - 2t)$ equals to 6, when x = 1.
SECTION C (4marks)	
Q21.	**Case Study** I walk around the edge of a field. I start at the point marked as A in figure and walk around the field until I get back to where I started ie; at A.  Based on the above information answer the following: 1. What is the algebraic expression for the distance I walked: a) $h + 34$ b) $2h + 34$ c) $h + 17$ d) $2h + 30$ 2. What is the coefficient of 'h' in the expression for the total distance I walked. a) 1 b) 2 c) 3 d) 4 3. What would be the value of 'h' If I walked a total of 50 metres? a) 2 b) 4 c) 6 d) 8 4. How far would I have walked if h = 10? a) 44 b) 34 c) 54 d) 27

Q.22	**Case Study** Neena has a garden in the shape of a right triangle. The dimensions of the triangle is shown in the given figure.  Based on above information answer the following: 1) The perimeter 'P' of the triangular garden is: a) $4x+4y$ b) $6x+3y+5$ c) $4x+4y+5$ d) $3x+2y+7$ 2) What is the coefficient of x in the perimeter P? a) 5 b) 3 c) 6 d) 4 3) What is the coefficient of y in the perimeter P? a) 1 b) 4 c) 2 d) 3 4) Find the value of P, if x = 2 and y = 3 a) 22 b) 20 c) 25 d) 19
Q23.	Simplify by combining the like terms: (i) $a-(a-b)-b-(b-a)$ (ii) $x^2-3x+y^2-x-2y^2$
Q24.	If $A=2x^2+3xy-5$ $B=x^2+2xy-7$ $C=3xy+x^2-2$. Find A + B + C and A + B - C
Q25.	Subtract $3x^2-5y-2$ from $-3x^2+5y+9$ and find the value of the result if x = 2, y $= -1$.

	ANSWERS							
Answers	**Q.1.**	D) 4	**Q.2**	B) $-7 \times p \times p \times q \times q \times q \times s$	**Q.3.**	B) -34	**Q.4**	C) 5
	Q.5.	C) -1	**Q.6**	D) 4xy	**Q.7**	B) ab – (a + b)	**Q.8**	D) $-5xy$, 7yx
	Q.9.	A) 3a + 2b	**Q.10**	B) z^2	**Q.11**	-3	**Q.12**	Equation
	Q.13	Like terms	**Q.14**	Term	**Q.15**	8pqr	**Q.16**	$5x^2 - 6y^2$
	Q.17				**Q.18**	$3x^2 + 5xy - y^2 + 5$	**Q.19**	6xy + 22y + 4x
	Q.20	t = 1	**Q.21**	1.b) $2h + 34$ 2. b) 2 3. d) 8 4. c) 54	**Q.22**	1 c) $4x + 4y + 5$ 2. d) 4 3. b) 4 4. c) 25	**Q.23**	i) a – b ii) $x^2 - 4x - y^2$
	Q.24	**A + B + C** = $4x^2 + 8xy - 14$ **A + B - C** = $2x^2 + 2xy - 10$	**Q.25**	-23				

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