INDIAN SCHOOL AL WADI AL KABIR
Class VIII, Mathematics
WORKSHEET-2 (2025-26)
ALGEBAIC EXPRESSIONS AND IDENTITIES

Multiple Choice Questions

Q.1.	The product of (2x+7) (2x -7)							
	A	$2x^2 - 49$	B	$2x^2 + 49$	C	$4x^2 - 49$	D	$4x^2 - 14$
Q.2.	The area of square with side (x +2y)							
	A	x^2+4y^2	B	$x^2+4xy+4y^2$	C	$x^2+2xy+4y^2$	D	$x^2+4xy+2y^2$
Q.3.	The value of the expression y^2 -3xy +7x -2y for x= (-1) and y =(-2)							
	A	5	B	-5	C	8	D	13
Q.4.	The value of the expression y^3-3y^2+5 if y= (-3)							
	A	49	B	55	C	57	D	-49
Q.5.	The product of x^2y^2, $3x^3y$,$5xy^5$							
	A	$15x^6y^8$	B	$15x^7y^7$	C	$15x^5y^5$	D	$15x^6y^6$
Q.6.	The area of a rectangle with length (7m-3) and breadth (5m+7)							
	A	50m +28	B	20m +70	C	20m +28	D	50m+70
Q.7.	The product of (3y +7) (3y −8)							
	A	$9y^2-3y-56$	B	$3y^2-15y+56$	C	$9y^2-3y+56$	D	$9y^2+3y+56$
Q.8.	The volume of a cube with dimensions $2p^6$, $3pq^2$ and $4p^4 q^3$							
	A	$24p^{12}q^6$	B	$24p^{11}q^5$	C	$24p^9q^6$	D	$24p^{10}q^5$
Q.9	Area of parallelogram with base (4pq−3p) and altitude (6q + 1)							
	A	$24p^2q-22pq+3p$	B	$24pq^2+22pq-3p$	C	$24p^2q+22pq-3p$	D	$24pq^2-22pq+3p$
Q.10.	What is the value of $5x^{25} - 3x^{33} - 2x^{12}$ at x= (-1)?							
	A	-4	B	0	C	4	D	6

	LONG ANSWER QUESTIONS:
Q.11	Find the product: $(2x + 3)(x^2 – 3x + 7)$
Q.12	Find the product of $(3a+4b)(2a+3b)$ and evaluate for $a= 2, b=(-1)$.
Q.13	Find the product by identity: $(5a^2 +4b^2)(5a^2 - 4b^2)$
Q.14	Find the product :(1) $(y+5)(y-3)$ (2) $(6x-2y)(6x-2y)$ (3) $(3x +y)(4x +3y -8)$
Q.15	Multiply and evaluate when x=3 and y=1 $(x^2y -1)(3-2x^2y)$
Q.16	Simplify: $(2x-3)(5x^2-6x +9) -3x(5x^2+9)$
Q.17	Simplify: $(3a-2a)(a-1)(3a+5)$
Q.18	Find the product by identity:$(\frac{3}{4}x^2 +5)(\frac{3}{4}x^2 +5)$
Q.19	Find the product $(4-3x)(2x^2 -13x +15)$
Q.20.	**CASE STUDY:**   Ramu's grandfather goes to the park for a morning walk every day as advised by the doctor. He takes four rounds of the park in half an hour. The park has a length of (3x+2y) metres and a breadth of (2x–3y) metres. Based on this information, answer the following questions: 1. Find the area of the park. 2. How much distance does he cover daily? 3. In the park, there is a square flower bed with side (3p+7) metres. Find the area of the flower bed. 4. If the flower bed is surrounded by a small fence, what is the length of the fence?

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ANSWERS

Q1. C	Q2. B	Q3. B	Q4. D	Q5. A
Q6. C	Q7. A	Q8. B	Q9. B	Q10. A
Q11. $2x^3 - 3x^2 + 5x + 21$	Q12. 22	Q13. $25a^4 - 16b^4$	Q14. 1)$y^2 + 2y - 15$ 2)$36x^2 - 24xy + 4y^2$ 3) $12x^2 + 13xy - 24x - 8y + 3y^2$	Q15. $5x^2y^2 - 2x^4y^2 - 3$
Q16. $-5x^3 - 27x^2 + 9x - 27$	Q17. $-3a^3 - a^2 + a - 15$	Q18 $\frac{9}{16}x^4 - \frac{15}{2}x^2$+25	Q19. $-6x^3 + 47x^2 - 97x + 60$	Q20. 1)$6x^2 - 5xy - 6y^2$ 2)40x$-8y$ 3)$9p^2 + 42p + 49$ 4) 12p +28