INDIAN SCHOOL AL WADI AL KABIR

Class VIII, Mathematics (2023-24)

Worksheet (DTQ) -FACTORISATION

SHORT ANSWER TYPE QUESTIONS- 7 QUESTIONS. (2 Marks each)	
Q1.	Add: $7xy + 7yz - 12zx$ and $3xz + 5yz - 7xy$.
Q2.	Carry out the following divisions: $3pqr - 6p^3q^2r^2 \div 3pq$
Q3.	Factorize using suitable method: $7x^2 + 14x + xz + 2z$
Q4.	Factorize the given expression using identities: $9x^2 - 30x + 25$
Q5.	Find: $(-36y^3) \div 9y^2$
Q6.	The common factor of $22b^4$, $11\,a^2b$ and $121c^3$
Q7.	Evaluate by using identify: $79^2 - 21^2$
SHORT ANSWER TYPE- 5 QUESTIONS. (3 Marks each)	
Q8.	Factorize the following expression: $p^2 + 2p - 8$
Q9.	Divide: $(45p^2 - 80)$ by $5\,(3p + 4)$
Q10.	Factorize the following expressions. (i) $-11p^2s^3 + 121p^3y^2$ (ii) $a^3 - 4a^2 + 12 - 3a$ (iii) $5x^2 - 20x - 25$
Q11.	The area of a rectangle is $x^2 + 7x + 12\ sq.units$. If its breadth is $(x + 3)units$, then find its length.
Q12.	If $a + b = 25$ and $a^2 + b^2 = 225$, then find ab.
LONG ANSWER TYPE- 3 QUESTIONS. (4 Marks each)	
Q.13	The area of a square is given by $4x^2 + 52xy + 169y^2\ sq.units$. Find the side of the square.
Q14.	Factorize the expressions and divide them as directed: (i) $(2k^3 - 34k^2 + 144k) \div (k - 9)(k - 8)$ (ii) $(f^3 + f^2 - 132\,f) \div f(f - 11)$

Q15.	Factorize using suitable identity: (i) $4p^4 - 20p^2q + 25q^2$ (ii) $t^2 - 8t + 16$ (iii) $28ay^2 - 175az^2$ (iv) $m^2 - 9$

ANSWERS

1	$14xy + 12yz - 9zx$	**2**	$r - 2p^2qr^2$	**3**	$(x + 2)(7x + z)$	**4**	$(3x - 5)(3x - 5)$
5	$-4y$	**6**	11	**7**	5800	**8**	$(p + 4)(p - 2)$
9	$(3p - 4)$	**10**	$-11p^2(s^3 - 11py^2)$; $(a - 4)(a^2 - 3)$; $5(x - 5)(x + 1)$;	**11**	$(x + 4)$	**12**	200
13	$(2x + 13y)(2x + 13y)$	**14**	2k $(f + 12)$	**15**	$(2p - 5q)(2p - 5q)$; $(t - 4)(t - 4)$; $a(28y^2 - 175z^2)$; $(m + 3)(m - 3)$		