



INDIAN SCHOOL AL WADI AL KABIR

Class VIII, Mathematics (2024-25)

Worksheet DTQ – FACTORISATION

SHORT ANSWER TYPE QUESTIONS- 8 QUESTIONS. (2 Marks each)

Q1.	Write down the factors of $4x^2y^3, 10x^3y^2$.
Q2.	Factorize $2x^2yz + 4xy^2z - 6xyz^2$
Q3.	Factorize $16y^2 - 81z^2$ using suitable algebraic identity
Q4.	Factorize $a^2 + 10a + 21$
Q5.	Factorize $25a^2 + 40ab + 16b^2$
Q6.	Divide $24xy^2z^3$ by $6yz^2$
Q7.	Find the division of $-40z^4yx^2$ by $2xz^3$
Q8.	Find the division of $18(x^2 - 4)$ by $3(x + 2)$

SHORT ANSWER TYPE- 4 QUESTIONS. (3 Marks each)

Q9.	Factorize $(4l - m)^2 - (4l + m)^2$
Q10.	Factorize $15a^2b - 5ab + 45ab^2$
Q11.	Factorize $42st(49s^2 - 36t^2)$ and divide by $21st(7s - 6t)$
Q12.	Find $(x^3 - 6x^2 - 27x) \div (x(x^2 - 9x))$

LONG ANSWER TYPE- 3 QUESTIONS. (4 Marks each)

Q.13	Using suitable identities factorize the following (i) $x^4 - 16$ (ii) $121y^2 - 66yz + 9z^2$ (iii) $2a^2 + 4ab + b^2$
Q14.	Factorize $2p^2 + 10p - 48$
Q15.	Find $8x^2y^3(x^3 - x^2 - 12x) \div 2xy(x^2 + 6x + 9)$

ANSWERS

Q1.	$2x^2y^2$	Q2.	$2xyz(x + 2y - 3z)$	Q3.	$(4y + 9z)(4y - 9z)$
Q4.	$(a + 3)(a + 7)$	Q5.	$(5a + 4b)^2$	Q6.	$4xyz$
Q7.	$-20xyz$	Q8.	$6(x - 2)$	Q9.	$-16ml$
Q10.	$5ab(3a - 1 + 9b)$	Q11.	$2(7s + 6t)$	Q12.	$\frac{x - 9}{x - 3}$
Q 13.	(i) $(x^2 + 4)(x + 2)(x - 2)$ (ii) $(11y - 3z)^2$ (iii) $(\sqrt{2}a + b)^2$				
Q 14.	$2(x + 8)(x - 3)$	Q 15.	$\frac{4x^2y^2(x - 4)}{x + 3}$		