INDIAN SCHOOL AL WADI AL KABIR

Class VIII, Mathematics (2022-23)

Worksheet DTQ – FACTORISATION

SHORT ANSWER TYPE QUESTIONS- 7 QUESTIONS. (2 Marks each)

Q1.	Using suitable identity factorise: $4a^2 - 4ab + b^2$.
Q2.	Factorise: $r^2 - 9r + 20$.
Q3.	Carry out the following divisions: $(3pqr - 6p^2q^2r^2) \div 3pq$
Q4.	The area of a square is given by $4x^2 + 52xy + 169y^2\ sq.units$. Find the side of the square.
Q5.	Factorise the expression $63p^2q^2r^2s - 9pq^2r^2s^2 + 15p^2qr^2s^2 - 60p^2q^2rs^2$.
Q6.	Find the value of a, if $8a = 35^2 - 27^2$.
Q7.	Factorise $21g^2k^3 + 27g^3k^2$ by the method of common factor.

SHORT ANSWER TYPE- 5 QUESTIONS. (3 Marks each)

Q8.	If a + b = 25 and $a^2 + b^2 = 225$, then find ab.
Q9.	The area of a rectangle is $x^2 + 7x + 12\ sq.units$. If its breadth is $(x + 3)units$, then find its length.
Q10.	Factorise the expressions and divide them as directed: $(2x^3 - 12x^2 + 16x) \div (x - 2)(x - 4)$
Q11.	Factorise the following expressions. (i) $-11p^2s^3 + 121p^3y^2$ (ii) $a^3 - 4a^2 + 12 - 3a$ (iii) $5x^2 - 20x - 25$
Q12.	Divide: $15(y + 3)(y^2 - 16)\ by\ 5(y^2 - y - 12)$

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

Q13.	Factorise the expressions and divide them as directed: (i) $(2t^3 - 34t^2 + 144t) \div (t - 9)(t - 8)$

	(ii) $(b^3 + b^2 - 132\,b) \div b(b - 11)$
Q14.	Factorise using suitable identity: (i) $4p^4 - 20p^2q + 25q^2$ (ii) $t^2 - 8t + 16$ (iii) $28ay^2 - 175az^2$ (iv) $m^2 - 9$
Q15.	Divide: (i) $4(a^4 - 5a^3 - 24a^2)\ by\ 11a^2(a^2 + 11a + 24)$ (ii) $9p^2q^2(3z - 12) \div 27pq(z^2 - 15z + 44)$

ANSWERS					
Q1.	$(2a - b)^2$	Q2.	(r-5)(r-4)	Q3.	(r-2pqr^2)
Q4.	(2x+13y) units	Q5.	3pqrs(21pqr-3qrs+5prs-20pqs)	Q6.	62
Q7.	3g^{2}k^2(7k+9g)	Q8.	200	Q9.	(x+4) units
Q10.	2x	Q11.	(i) 11p^2[-s^3+11py^2] (ii) (a-4)(a^2-3) (iii) 5(x+1)(x-5)	Q12.	3(y+4)
Q13.	(i)2t (ii)(b+12)	Q14.	(i)(2p^2-5q)^2 (ii)(t-4)(t-4) (iii)7a(2y+5z)(2y-5z) (iv)(m+3)(m-3)	Q15.	(i)$\frac{4(a-8)}{11(a+8)}$ (ii) $\frac{pq}{(z-11)}$