INDIAN SCHOOL AL WADI AL KABIR

Class VIII, Mathematics

Worksheet 2- Factorisation with Answer

OBJECTIVE TYPE (1 Mark)

Q.1.	Which of the following is the common factor of $2x^2y$ and $30xy^2$?							
	A	7	**B**	xy	**C**	2xy	**D**	none of these.

Q.2.	Which of the following are the factors of $1 - x^2$?							
	A	$(x + 1)(x - 1)$	**B**	$(1 - x)(1 - x)$	**C**	$(1 + x)(1 + x)$	**D**	$(1 - x)(1 + x)$

Q.3.	Which of the following is the common factor of 5xy, 3pqr and 4xyz?							
	A	5	**B**	0	**C**	xy	**D**	1

Q.4.	Which of the following is quotient obtained on dividing $-18xyz^2$ by $-3xz$?							
	A	6yz	**B**	$-6yz$	**C**	$6xy^2$	**D**	6xy

Q.5.	Which of the following is quotient obtained on dividing $(x^2 - b)(x - a)$ by $(x - a)$?							
	A	$(x^2 - b)$	**B**	$(x + a)$	**C**	$(x^2 + b)$	**D**	$\dfrac{(x - b)}{(x + a)}$

Q.6.	Which of the following are the factors of $-20x^2 + 10x^4$							
	A	$10x^2(x^2 + 2)$	**B**	$20x^2(x^2 - 1)$	**C**	$40x(x^2 - 1)$	**D**	$10x^2(x^2 - 2)$

Q.7.	The value of $0.645 \times 0.645 + 2 \times 0.645 \times 0.355 + 0.355 \times 0.355$ is							
	A	0	**B**	-1	**C**	2	**D**	1

Q.8.	A rectangle has area $x^2 + 13x + 40$ square feet. The width is (x+5). What is the length?							
	A	(x+3) feet	**B**	(x+13) feet	**C**	(x+8) feet	**D**	(x+5) feet

Q.9.	Factors of $8x + 8y + x^2 + xy$							
	A	(8 - x)(x - y)	**B**	(8 + x)(x +y)	**C**	(8 + x)(x - y)	**D**	(8-x)(x+Y)

Q.10	When we factorise an expression, we write it as a_____ of factors.							
	A	Product	**B**	Sum	**C**	Difference	**D**	Quotient

DESCRIPTIVE QUESTIONS	
Factorisation using identities	
Q11.	$4y^2 - 12y + 9$
Q12.	$49p^2 - 36$
Q13.	$a^2 - 2ab + b^2 - c^2$
Q14.	$m^4 - 256$
Q15.	$x^2 + 6x + 9$
Factors of the form (x + a) (x + b)	
Q16.	$x^2 + 5x + 6$
Q17.	$y^2 - 7y + 12$.
Q18.	$z^2 - 4z - 12$
Q19.	$m^2 + 9m + 20$.
Q20.	$x^2 - 17x + 16$
Factorize each of the following by regrouping:	
Q21.	$x^2 + xy + 9x + 9y$
Q22.	$6xy - 4y + 6 - 9x$
Q23.	$x^3 - x^2y + 5x - 5y$
Q24.	$x^3 + x^2 + x + 1$
Q25.	$x^2 - x(a + 4b) + 4ab$
Division of Algebraic Expressions **Monomial by another monomial**	
Q26.	$15a^4b^3 \div 12a^2b$
Q27.	$(-76a^2b^3c) \div (-19ab^2c)$
Q28.	$-20x^4 \div 10x^2$
Q29.	$28x^2 y^2 z^2 \div 14xyz$
Q30.	$6x^3 \div 2x$
Polynomial by a monomial	
Q31.	$x^6 + 7x^5 - 5x^4$ by x^2
Q32.	$a^2 + ab - ac$ by a

Q33.	a^3 - a^2b – a^2b^2 by a^2
Q34.	$4y^3 + 6y^2 + 6y$ by $2y$
Q35.	Divide $24(x^2yz + xy^2z + xyz^2)$ by $8xyz$

Algebraic Expressions- (Polynomial ÷ Polynomial)

Q36.	$(7x^2 + 14x) \div (x + 2)$
Q37.	$44(x^4 – 5x^3 – 24x^2)$ by $11x^2(x – 8)$
Q38.	$z(5z^2 – 80)$ by $5z(z + 4)$
Q39.	$x^2 + 3x + 2$ by $(x + 1)$.
Q40.	$9p^2q^2(3z – 12) \div 27pq(z – 4)$

Answers

Q1	$2xy$	Q11	$(2y – 3)^2$	Q26	$5/4\ a^2b^2$
Q2	$(1 – x)(1 + x)$	Q12	$(7p+6)(7p – 6)$	Q27	$4ab$
Q3	1	Q13	$(a\ -b + c)(a – b\ -c)$	Q28	$-2x^2$
Q4	$6yz$	Q14	$(m^2 + 4^2)(m+2)(m-2)$	Q29	$2xyz$
Q5	$(x^2 – b)$	Q15	$(x+3)^2$	Q30	$3x^2$
Q6	$10x^2(x^2 – 2)$	Q16	$(x+2)(x+3)$	Q31	$x^4+7x^3-5x^2$
Q7	1	Q17	$(y-3)(y-4)$	Q32	$a+b-c$
Q8	$(x+8)$ feet	Q18	$(z +2)(z - 6)$	Q33	$a-b-b^2$
Q9	$(8 + x)(x +y)$	Q19	$(m+5)(m+4)$	Q34	$2y^2 +3y+ 3$
Q10	Product	Q20	$(x-1)(x-16)$	Q35	$3(x+y+z)$
		Q21	$(x + y)(x + 9)$	Q36	$7x$
		Q22	$(2y - 3)(3x - 2)$	Q37	$4(x -3)$
		Q23	$(x - y)(x^2 + 5)$	Q38	$z-4$
		Q24	$(x^2 + 1)(x + 1)$	Q39	$x+2$
		Q25	$(x – 4b)(x - a)$	Q40	pq