

The City School
Boys Campus North Nazimabad
Mathematics Worksheet
Class 11 (IEP)
Class/Sec: _____
ALGEBRA 1: Operations



Name: _____

1) $4x + 2x =$	2) $3x + 5x =$	3) $12m + 9m =$
4) $10ab - 4ab =$	5) $13xy + 4xy =$	6) $7t + 3t - 5t =$
7) $10ry - 2ry =$	8) $r^2 + r^2 =$	9) $12d^2 - 8d^2 =$

10) $8d + 1d + 5 =$	11) $10a + 12a - 2 =$
12) $8a + 3a + 4b - 5b =$	13) $2r - 5r + 9t - 3t =$
14) $8h + 6h^2 - 2h + 5h^2 =$	15) $10mn + 5 - 2mn =$
16) $16 + 4p + 3p - 2q^2 =$	17) $7 - p^2 + p - 8 =$

18) $\frac{10x}{2} = \dots\dots\dots x$	19) $\frac{8a}{4} = \dots\dots\dots a$	20) $\frac{12m}{4} = \dots\dots\dots m$
21) $\frac{24}{6y} =$	22) $\frac{18}{9f} =$	23) $\frac{45}{5p} =$
24) $\frac{5a}{10a} =$	25) $\frac{6}{6t} =$	26) $\frac{8ab}{6bc} =$
27) $24xy \div 6x =$	28) $d \div 3d =$	29) $40ab \div 20bc =$

30) $5 \times 2a =$	31) $m \times 14n =$	32) $8 \times \frac{1}{2}p =$
33) $6t \times 2m =$	34) $-3a \times 6 =$	35) $-5c \times (-4) =$
36) $4 \times 2a \times 3b =$	37) $7 \times 2y \times 3x =$	38) $3k \times 2m \times 2 =$

39) $p^3 \times p^2 =$	40) $m^4 \times m^3 =$	41) $a^3 \times a^4 =$
42) $6y^3 \times 5 =$	43) $2w^2 \times 7 =$	44) $6x^3y \times 4y =$
45) $2n^2 \times n^2 =$	46) $3t^2 \times 5t^5 =$	47) $2b^7c \times b^4d =$

48) $p^4 \div p^2 =$	49) $m^4 \div m^3 =$	50) $a^5 \div a^4 =$
51) $6d^7 \div d^5 =$	52) $8y^5 \div y^2 =$	53) $9d^8 \div 3d^4 =$

54) $\frac{21y}{7} =$	55) $\frac{6}{2x^2} =$	56) $\frac{3mn}{6} =$
57) $\frac{xy}{y} =$	58) $\frac{21xy}{7y} =$	59) $\frac{6mn}{2n} =$

60) $2(y + 3) =$	61) $7(a - 2) =$	62) $5(2a - b) =$
63) $t(t + 8) =$	64) $y(2y + x) =$	65) $2m(m + n) =$

66) $6(y + 3) + 1 =$	67) $6a + 3(a - 1) =$
68) $8 - 2(a + 4) =$	69) $2(a + 3) + 2a + 2 =$

Factorise

70) $4m + 12 = \dots\dots (\dots\dots + \dots\dots)$	71) $16j - 8 =$
72) $2n + 4m =$	73) $st + 2t =$

ALGEBRA 2: Equations

1) $p + 52 = 61$	2) $23 = c - 30$	3) $\frac{j}{3} = 18$
4) $-3h = 15$	5) $5b + 2 = 27$	6) $2a - 3 = 17$
7) $45 = 7e - 11$	8) $7 - 3d = -2$	9) $7 = 17 + 6t$
10) $15 - 6n = 20$	11) $2b + 5 = b + 9$	12) $7 - 3g = 9 - g$
13) $4s - 3 = 9 - 3s$	14) $3(2x + 5) = 36$	15) $5(1 - k) = 3$
16) $2(x + 5) = x + 9$	17) $5(1 + x) = 2(x - 5)$	18) $3(2z + 5) = 3(z - 2)$
19) $\frac{h}{2} + 6 = 9$	20) $4 = \frac{n}{3} - 2$	21) $\frac{2p}{3} = 4$
22) $\frac{5 + m}{3} = 1$	23) $\sqrt{\frac{x}{2}} = 5$	24) $x^2 = 169$

ALGEBRA 3: Substitution, Formula, Problem Solving

Evaluate the following if $a = 5$, $b = 6$, $c = 10$

1) $a + b + c$	2) $3a + 2c$	3) $b^2 c$
4) $(a + b)^2$	5) $\frac{b}{2} + \frac{c}{5}$	6) $2(a - 2c)$
7) $\frac{a + b}{b - a}$	8) abc	9) $(2abc)^2$

10) $A = LB$ find A when $L = 2.5$ and $B = 10$	11) $A = LB$ find L when $A = 30$ and $B = 10$.
12) $v = u + at$ find v when $u = -5$, $a = 4$, $t = 2.5$	13) $v = u + at$ find u when $v = 25$, $a = 3$, $t = 5$
14) $C = \frac{5}{9}(F - 32)$. Find F when $C = 100$	15) $K = \frac{1}{2}mv^2$ find K when $m = 6$, $v = 2.5$
16) Make u the subject in $v = u + at$	17) Make t the subject in $v = u + at$
18) Make m the subject in $K = \frac{1}{2}mv^2$	19) Make v the subject in $K = \frac{1}{2}mv^2$

Solve each of the following problems by first forming an equation, using the pronumeral 'x' to represent the unknown.

20) A number is multiplied by 4 then 12 is added and the result is 14. What is the number?	21) A number is doubled and then 5 is added. When this is divided by 3 the result is 7. What is the number?
22) In a class of 28 students it is known that there are 6 more boys than girls. How many girls are there in the class?	23) Bryan is 25 years older than Wayne and in five years he will be twice as old as Wayne. Find their present ages.