

वालिङ नगरपालिका, वालिङ, स्याङ्जा  
**Waling Municipality, Waling, Syangja**  
 आधारभूत तह(कक्षा ८) अन्तिम परीक्षा- २०७५  
**Basic Level (Class 8) Final Examination-2075**

कक्षा : ८

पूर्णाङ्क : १००

समय : ३ घण्टा

**Marking Scheme**

विषय : अनिवार्य गणित

**(Compulsory Mathematics)**

Group 'A'

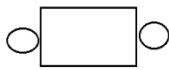
10X1=10

- 1(a) For correct value of  $x^0=30$  .....1Mark  
 (b) For correct formula area of circle  $A = \pi r^2$  .....1 Mark  
 2(a) For correct x-intercept  $x=6$ .....1 Mark  
 (b) For correct direction.....1 Mark  
 3(a)  $A \cup B = \{7,9\}$ .....1 Mark  
 (b) Mode=3 .....1 Mark  
 4(a)  $0.0080321=8.0321 \times 10^{-6}$  .....1 Mark  
 (b) For  $2^x=2^0$  .....0.5 Mark  
 $x=0$  .....0.5 Mark  
 5(a)  $a^2-b^2=(a+b)(a-b)$  .....1 Mark  
 (b)  $x > -1$  .....1 Mark

Group 'B'

17X2=34

- 6(a) For  $2a+10+a+20=180^0$  .....0.5 Mark  
 $3a=180^0-30^0$  .....0.5 Mark  
 $a=50^0$  .....0.5 Mark  
 $\therefore b = 70^0$ (reason) .....1 Mark  
 (b) For A.S.A. axiom .....2 Marks  
 7(a) For  $2\pi r=44$  .....0.5 Mark  
 $r=7\text{cm}$ .....0.5 Mark  
 For, area=  $\pi r^2$  .....0.5 Mark  
 $A=154\text{cm}^2$  .....0.5 Mark  
 (b)



.....2 Marks

- (c) For  $\frac{AC}{CE} = \frac{AB}{DE} = \frac{BC}{CD}$  .....1 Mark  
 $x=15\text{cm}$  .....1 Mark

- 8(a) Area of square ABCD= $l^2=100$  .....0.5 Mark  
 Area of Rectangle PQRS= $l \times b=40$  .....0.5 Mark  
 Area of Shaded part =ABD-PQRS.....1 Mark

(b)Distance Formula:

$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$  .....1 Mark

$MN = \sqrt{34}$  .....1 Mark

(c)  $M - N = \{2, 4, 8\}$ .....1 Mark

For correct Venn-diagram.....1 Mark

9.(a)Supposing  $5x$  &  $7x$  .....0.5 Mark

$5x + 7x = 600$  .....0.5 Mark

$x = 50$  .....0.5 Mark

$5x = 250$  }  
 $7x = 350$  } .....0.5 Mark

(b) For Dividing .....1 Mark

For Correct Answer: 105  $\longrightarrow$   $1101001_2$  .....1 Mark

(c) For Correct order .....0.5 Mark

For Correct Formula =  $\left(\frac{N+1}{2}\right)^{th}$  item .....0.5 Mark

For Correct Median =  $\frac{10+12}{2} = 11$ .....1 Mark

10(a)  $2(4x^2 - 9y^2)$  .....0.5 Mark

$2\{(2x)^2 - (3y)^2\}$ .....0.5 Mark

$2(2x+3y)(2x-3y)$  .....1 Mark

(b) For  $xy^{2-3}$  .....1 Mark

=  $xy^{-1}$  or  $\frac{x}{y}$  .....1 Mark

(c) For  $2x + 3 = 35$  .....0.5 Mark

$2x = 32$  .....0.5 Mark

$x = 16$  .....1 Mark

(d) For  $\frac{2^5 \times 3^3}{2^2 \times 3^2}$  .....0.5 Mark

$2^{5-2} \times 3^{3-2}$  .....1 Mark

$8 \times 3 = 24$  .....0.5 Mark

11.(a) For Correct Formula

$P(x, y) \longrightarrow p^l(x, y)$  .....1 Mark

$A(-3, 4) \longrightarrow A^{l(-3, -4)}$  .....1 Mark

(b)  $3x [ 2+7 \& x ] 3$  .....1 Mark

For Number Line .....1 Mark

Group'C'

14X4=56

12. interior angle =  $\frac{n-2}{x} \times 180^\circ$

=  $\frac{3}{5} \times 180^\circ$

=  $108^\circ$



.....1 Mark

For Correct Construction: .....3 Marks

13. For Correct Figer .....1 Mark

For Tabulation & measurement .....2 Marks

For Correct Conclusion .....1 Mark

14. For transforming point

$P(3,2) \xrightarrow{-90^\circ} P'(2,-3)$  .....1 Mark

$Q(5,2) \xrightarrow{\quad} Q'(2,-5)$  .....1 Mark

$R(3,-2) \xrightarrow{\quad} R'(-2,-3)$  .....1 Mark

For Graph .....1 Mark

15. For Cubing on bothside

$(a + \frac{1}{a})^3 = a^3 + \frac{1}{a^3} + 3a \cdot \frac{1}{a} (a + \frac{1}{a})$  .....2 Marks

$5^3 = a^3 + \frac{1}{a^3} + 3 \times 5$  .....1 Mark

$\square a^3 + \frac{1}{a^3} = 110$  .....1 Mark

16.

$\frac{\sqrt{3}+2}{\sqrt{3}-2} \times \frac{\sqrt{3}+2}{\sqrt{3}+2} + \frac{\sqrt{3}-2}{\sqrt{3}+2} \times \frac{\sqrt{3}-2}{\sqrt{3}-2}$  .....1 Mark

$\frac{(\sqrt{3}+2)^2}{(\sqrt{3})^2-(2)^2} + \frac{(\sqrt{3}-2)^2}{(\sqrt{3})^2-(2)^2}$  .....1 Mark

$\frac{7+4\sqrt{3}}{-1} + \frac{7-4\sqrt{3}}{-1}$  .....1 Mark

-14 .....1 Mark

17.  $m^2-25=(m+5)(m-5)$  .....1 Mark

$m^2-9m+20=(m-5)(m-4)$  .....2 Marks

For Correct HCF=(m-5) .....1 Mark

18.  $\frac{x+1-x+1}{(x-1)(x+1)} + \frac{2}{x^2+1}$  .....1 Mark

$\frac{2}{x^2-1} + \frac{2}{x^2+1}$  .....1 Mark

$\frac{2x^2+2+2x^2-2}{(x^2-1)(x^2+1)}$  .....1 Mark

$$\frac{4x^2}{4x^4-1} \dots\dots\dots 1 \text{ Mark}$$

19. For Tabulating eq<sup>n</sup>(i) .....1 Mark

For Tabulating eq<sup>n</sup>(ii) .....1 Mark

For Graph .....1 Mark

For Correct point of intersection (5,3) .....1 Mark

20. For upper part  $v_1 = l \times b \times h = 6 \times 4 \times 3 = 72 \text{cm}^3$  .....1.5 Marks

For lower part  $v_2 = l \times b \times h = 6 \times 3 \times 3 = 54 \text{cm}^3$  .....1.5 Marks

Total Volume of solid  $= v_1 + v_2 = 72 + 54 = 126 \text{cm}^3$  .....1 Mark

21.

Men	Days
200	30
X(let)	40

..... 1 Mark

$$\frac{x}{200} = \frac{30}{40} \dots\dots\dots 1 \text{ Mark}$$

$$X = 150 \dots\dots\dots 1 \text{ Mark}$$

☐ घटाउनुपर्ने सिपाही ५० जना ..... 1 Mark

22. Discount amount  $= \frac{3}{100} \times 1600 = 48$  ..... 1 Mark

For P.A.D.  $= 1600 - \frac{3}{100} \times 1600 = 1552$  ..... 1 Mark

Vat Amount = V% of PAD

$$= \frac{13}{100} \times 1552 = 201.76 \dots\dots\dots 1 \text{ Mark}$$

$$\text{S.P. With VAT} = 1552 + \frac{13}{100} \times 1552 = 1753.76 \dots\dots\dots 1 \text{ Mark}$$

23. S.I. = 120

R = 2%

T = 3 years

P = ?

} ..... 1 Mark

For Formula  $P = \frac{IX100}{TXR}$  ..... 1 Mark

$$= \frac{120 \times 100}{3 \times 2} \dots\dots\dots 1 \text{ Mark}$$

$$= \text{Rs. } 2000 \dots\dots\dots 1 \text{ Mark}$$

24.

x	f	fx
5	6	30
10	3	30
15	6	90
20	7	140
25	4	100

30	4	120
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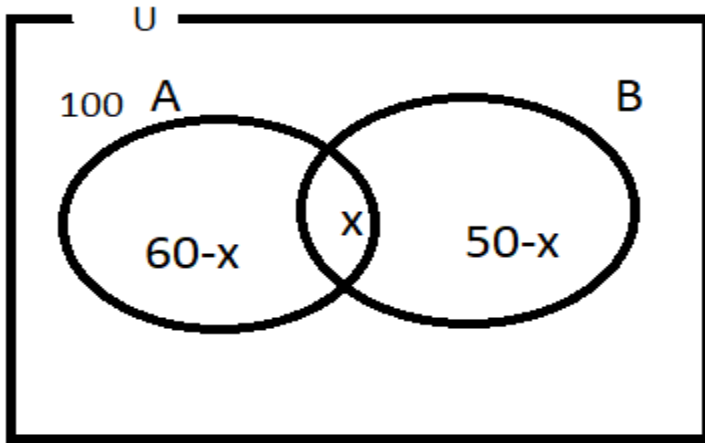
$N=30, \sum fx=510$  ..... 2 Marks

Mean(X) =  $\frac{\sum fx}{N} = \frac{510}{30}$  ..... 1 Mark

=17 ..... 1Mark

25. For Correct Venn-diagram

..... 1Mark



$100=60-x+x+50-x$  ..... 1Mark

$X=10$  ..... 1Mark

$No.(B)=50-10=40$  ..... 1Mark

Note: Alternative method can also be used to solve above Questions.

\*\*\*समाप्त\*\*\*