

**SECOND INTRA SCHOOL MATHEMATICS OLYMPIAD
ANSWER KEY
CLASS VII**

1. $\frac{287}{7} = 41$ (D)

2. items produced in 60 sec = 150

items produced in 10 sec = $\frac{150}{60} \times 10 = 25$ (B)

3. The number of tiles = 26 (A)



4. divisor = 5, quotient = 4, remainder = 8

$$\begin{aligned} \text{Number} &= (\text{divisor} \times \text{quotient} + \text{remainder}) \\ &= 2 \times (10 + 5) \\ &= (5 \times 4 + 8) \\ &= 28 \text{ (C)} \end{aligned}$$

5. $5 \times 6 = 30$ ($5+6=11$) (C)

$1 \times 30 = 30$ ($1+30=31$)

$10 \times 3 = 30$ ($10+3=13$)

$2 \times 15 = 30$ ($2+15=17$)

6. $x+2x+3x=180^\circ$ (angle sum property)

$$6x=180^\circ$$

$$x=30^\circ$$

$$z+x=180^\circ \text{ (linear pair)}$$

$$z = 180^\circ - x$$

$$z = 180^\circ - 30^\circ$$

$$z = 150^\circ \text{ (A)}$$

7. Area of a triangle = $\frac{1}{2} \times b \times h$

$$= \frac{1}{2} \times 4 \times 3$$

$$= 6 \text{ (C)}$$

8. $= \frac{2}{3} \times 12$
= 8

$$= \frac{1}{2} \text{ of } 8$$

$$= 4 \text{ (D)}$$

9. Sakshi's present age = x
Four yrs ago her age = 4 + 11

$$= 15$$

Two yrs later she will be = 17 (B)

11. not red balls = 5

total balls = 6

probability = $\frac{5}{6}$ (E)

10. $\frac{9}{25} \times 100\% = 36\%$ (C)

12. $\frac{2}{3}$ of $\frac{3}{4} = \frac{2}{3} \times \frac{3}{4} = \frac{1}{2}$
 $\frac{1}{2}$ of 12=6 (D)

13. Circle (B)

14. $x+(x+1)+(x+2)=9$

15. Area of a triangle = $\frac{1}{2} b \times h$

$3x+3=90$

Area of 3 isosceles triangles = $3 \times \frac{1}{2} \times 4 \times 4$
 $= 3 \times 8$
 $= 24$ (D)

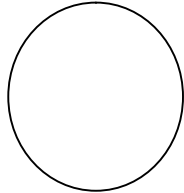
$3x=90-3$

$3x=87$

$x=29$

largest number = $29+2=31$ (C)

16.



17. speed = distance/time
 distance of bicycle in 3 hrs = $15 \times 3 = 45$ km
 distance of bus in 3 hrs = $195 + 45 = 240$ km
 average speed of the bus in km/h = $240 \div 3 = 80$ km/h (B)

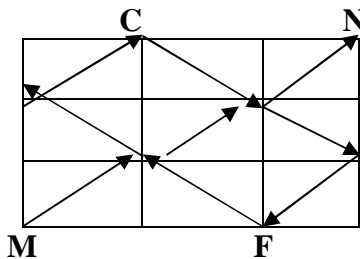
Total chords from each point = $5+4+3+2+1=15$ (B)

18.

$$\begin{array}{r} \square \quad \square \\ \times \quad \square \\ \hline \square \quad \square \quad \square \end{array} \quad \begin{array}{r} 54 \\ \times 3 \text{ (E)} \\ \hline 162 \end{array}$$

19. Odd numbered rows = $6 \times 15 = 90$ seats (1,3,5,7,9,11)
 Even-numbered rows = $5 \times 12 = 60$ seats (2, 4, 6, 8, 10)
 Total = 150 seats (A)

20.



MABCDEFADN=9 (E)

Answers -7th

1. D 2. B 3. A 4. C 5. C
 6. A 7. C 8. D 9. B 10. A
 11. E 12. D 13. B 14. C 15. D
 16. B 17. B 18. E 19. A 20. E