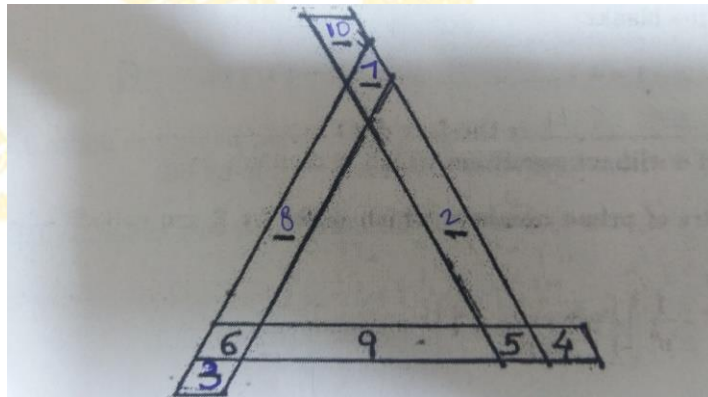# ANSWER KEY FOR

ARYABHATTA INTER-SCHOOL MATHS COMPETITION – 2001

Class - VIII

PART - I

1. (i)   9
   (ii)   **6534, 3564, 5346 & 4356 are 4 possible answers.**
   (iii)   **Twin**
   (iv) $p^{\wedge}(3a) - \dfrac{1}{p^{\wedge}(3a)}$
   (v)   **49**
   (vi)   **Sum**
   (vii)   **-3**
   (viii) **Equilateral**
   (ix)   **23˚**

   (x)

2. (i)   T
   (ii)   F
   (iii)   F
   (iv)   F
   (v)   T
   (vi)   T
   (vii)   F

(viii)   T

(ix)   F

(x)   F

3. (i)   (c)

(ii)   (b)

(iii)   (b)

(iv)   (d)

(v)   (c)

(vi)   (c)

(vii)   (c)

(viii)   (a)

(ix)   (d) [24 days]

(x)   (b)

PART - II

4. (a) $2\sqrt{2}x^2 - \dfrac{x}{6} + 6$

(b)   A - ₹1600, B - ₹1200 & C - ₹800

(c)   ₹6000 & ₹3000

5. (a) (i) 4   (ii) 120

(b) $\left(2x - \dfrac{1}{x} - 2\right)\left(2x - \dfrac{1}{x} + 2\right)$

(c)   Loss = 20%, S.P of 1 dozen pen = ₹12

6. (a)   5%, ₹2000

(b)   18

(c)   1.8 cm

7. (a)   16 gms

(b)   (ii) 165 cm,

(iii) Range = 29, Class Mark – 152.5, 157.5, 162.5, 167.5, 172.5, 177.5

(c)   20˚ & 50˚ respectively

8. (a)   32˚

(b)   240 cm²

(c)   64π - 96

9. (a)   10 **

(b)   **42 kmph, 2 kmph**

(c) $\sqrt{7.7}\ cm$, $\left(11\sqrt{2} + 11 - \frac{3}{7}\sqrt{7.7}\right)$ cm

** Small correction in the ques – The third term of the numerator should be $(0.3)^3$ instead of $(0.2)^3$