

SS.Lf

# Annual Examination - 1 Key

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- I**
1. D) 6
  2. A)  $\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}$
  3. D)  $x^2 + 3x + 4 = 0$
  4. A) any two equilateral triangles
  5. B)  $\frac{4}{3}\pi r^3$  cubic units
  6. C)  $\sqrt{x^2 + y^2}$
  7. C) -2
  8. B)  $80^\circ$

- II**
9. degree = 1
  10. T.S.A of a cube =  $6a^2$  sq. units
  11. 3-5
  12. 0
  13. One (or) Unique
  14. -1 and 4
  15. 0 and -2
  16. SSS

- III**
17. i)  $\sin \alpha = \frac{3}{5}$ , ii)  $\tan \theta = \frac{4}{3}$
  18.  $\sqrt{2} = \frac{a-bb}{b}$  (or) other integer = 12
  19.  $x=4, y=2$
  20. -2, -6 (or) No real roots
  21.  $S_{20} = 80$
  22.  $\angle AOB = 100^\circ$  &  $PB = 4$  cm
  23.  $x=2, y=3, z=5$
  24.  $x=6, y=2$

- IV**
25.  $\alpha = -5, \beta = -2$ , Verification -7, 10
  26. Theorem
  27. Proof (or)  $\frac{67}{12}$
  28. area of segment =  $40.2675 \text{ cm}^2$
  29. P(1,3)  
(or)  
 $3x + y - 5 = 0$
  30. Mean = 38 (or) Median = 28
  31. i)  $\frac{1}{5}$  ii)  $\frac{3}{20}$
  32. 20 cm and 15 cm  
(or)  
Even integers 8 and 10
  33. Proof

- V**
34.  $x=2, y=3$  (Graphically)
  35. Theorem
  36. Volume =  $360000\pi$  c. units  
(or)  
 $TSA = 35828.571 \text{ cm}^2$  ( $r=300$ )
  37. A.P is 3, 9, 15, 21, ...  
 $S_{16} = 3$  (sum of 16 odd)  
 $768 = 3$  (256)  
 $768 = 768$

- VI**
38.  $CD = 24$  m,  $AC = 12\sqrt{3}$  m

— Thank You —