

Diwali and Chhath Home Assignment  
[2022-23]  
S.R.D.A.V Public School, Agra

- 1) Express  $0.\overline{001}$  as a fraction in simplest form.
- 2) Find two rational numbers between 0.5 and 0.55
- 3) Find two irrational numbers between 0.16 and 0.17
- 4) Simplify:  $\sqrt{72} + \sqrt{800} - \sqrt{18}$
- 5) Represent  $\sqrt{5}$  on the real line.
- 6) Find the value of a and b if  $\frac{3+\sqrt{2}}{3-\sqrt{2}} = a+b\sqrt{2}$ .
- 7) If  $x = \frac{1}{3-\sqrt{5}}$ , find  $x^3$ .
- 8) Prove that  

$$\frac{a^{-1}}{a^{-1}+b^{-1}} + \frac{a^{-1}}{a^{-1}-b^{-1}} = \frac{2b^2}{b^2-a^2}$$
- 9) Write the following in ascending order  
 $\sqrt[5]{6}, \sqrt[3]{7}, \sqrt[4]{8}$
- 10) Find the value of  $\frac{2^0+5^0}{7^0}$ .
- 11) If  $\sqrt{2} = 1.414$  then find  $\sqrt{\frac{\sqrt{2}-1}{\sqrt{2}+1}}$ .
- 12) Find zero of the Poly  $g(x) = 3x+2$ .
- 13) Find the remainder when the Poly.  $P(x) = x^4+x^3-3x^2+x-1$  is divided by  $g(x) = (x-2)$ .
- 14) Check whether  $(7+3x)$  is a factor of  $(3x^3+7x)$ .
- 15) Factorize:  
 $x^2+y-xy-x$
- 16) Factorize: -  $x^4 + \frac{1}{x^4} + 1$ .
- 17) Factorize: -  $(x^4 - 625)$
- 18) Expand  $(4a-b+2c)^2$ .
- 19) Evaluate:  $(999)^2$ .
- 20) Expand:  $(4a+5b)^3$ .

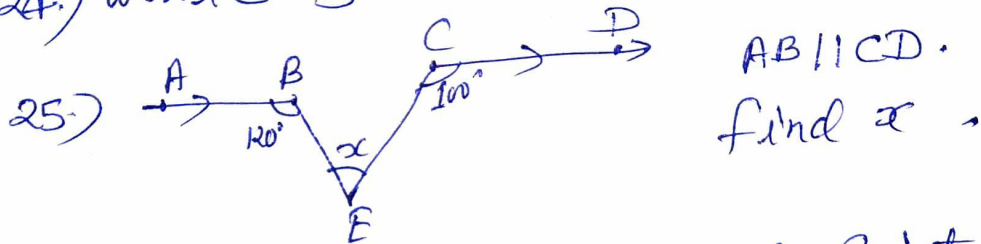
21.) If  $x+y=12$  and  $xy=27$ , find the value of  $(x^3+y^3)$ .

22.) Evaluate:

$$(-12)^3 + 7^3 + 5^3$$

23.) write the quadrant in which  $(-5, -3)$ ,  $(11, 6)$  lies.

24.) write 5th Postulate of Euclid's.



26.) state and prove mid-Point Theorem.

27.) factorize  $a^3+b^3+a+b$ .

28.) Prove that the sum of angles of a triangle is  $180^\circ$ .

29.) Define

(a) Vertically opposite angles

(b) Linear pair of angles.

30.) Define.

(a) Alternate interior angles.

(b) corresponding angles.

→ x ←