

- (c) neither congruent nor similar
8. The distance of a point  $P(36, 15)$  from the origin is  
(a) 15 units (b) 39 units (c) 39 units (d) 36 units
9. If  $3 \sin \theta = 2$  then value of  $5 \tan^2 \theta + 2$  is  
(a) 5 (b) 4 (c) 2 (d) 6
10. If  $\cot \theta = \frac{1}{\sqrt{3}}$ , then the value of  $\frac{1 - \cos^2 \theta}{2 - \sin^2 \theta}$  is  
(a) 1 (b)  $\frac{5}{3}$  (c)  $\frac{3}{5}$  (d)  $\frac{-3}{5}$
11. If 18 m long ladder is placed against a 9 m long wall such that it just reaches the window, then the elevation of the window is equal to  
(a)  $30^\circ$  (b)  $60^\circ$  (c)  $45^\circ$  (d)  $90^\circ$

17. Probability of getting composite number when a die is thrown is
- (a)  $\frac{1}{2}$  (b)  $\frac{2}{3}$  (c)  $\frac{1}{6}$  (d)  $\frac{1}{3}$
18. The probability of red queen when a card is drawn from well shuffled pack of 52 cards is
- (a)  $\frac{1}{52}$  (b)  $\frac{1}{26}$  (c)  $\frac{3}{52}$  (d)  $\frac{1}{13}$

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24. Given  $\tan \theta = \frac{a}{b}$  then find the value of  $\frac{2 \tan \theta}{1 + \tan^2 \theta}$ .

OR

Find the value of  $\frac{3 - \sin^2 60^\circ}{\sin^2 30^\circ + \cos^2 30^\circ} - 2 \tan^2 30^\circ + \sec 30^\circ \operatorname{cosec} 60^\circ$ .