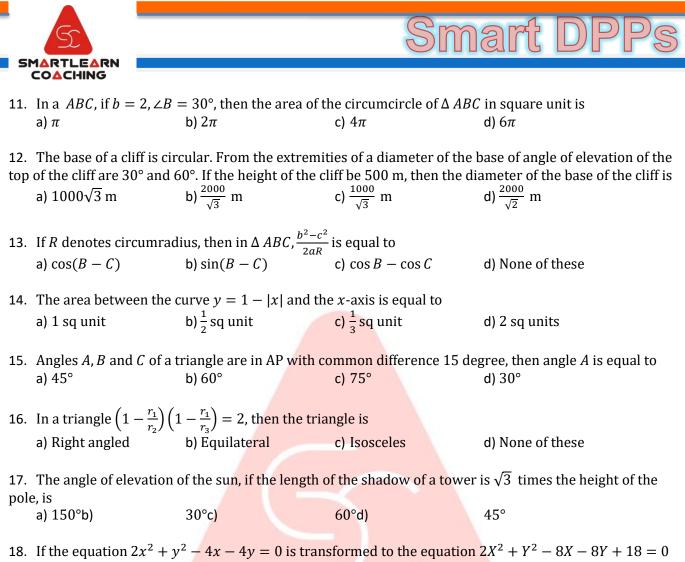


9. A vertical lamp-post, 6 m high, stands at a distance of 2 m from a wall, 4 m high. A 1.5 m tall man starts to walk away from the wall on the other side of the wall, in line with the lamp-post the maximum distance to which the man can walk remaining in the shadow is

a) $\frac{5}{2}$ m b) $\frac{3}{2}$ m c) 4 m d) None of these

10. A tower subtends an angle α at a point *A* in the plane of its base and the angle of depression of the foot of the tower at a point *b* feet just above *A* is β . Then, the height of the tower is

a) $b \tan \alpha \cot \beta$ b) $b \cot \alpha \tan \beta$ c) $b \cot \alpha \cot \beta$ d) $b \tan \alpha \tan \beta$



by shifting the origin at a point *P* without rotating the coordinates axes, then the coordinates of *P* are a) (1,2)b) (1,-2)c) (-1,2)d) (-1,-2)

19. A vertical pole *PS* has two marks *Q* and *R* such that the portions *PQ*, *PR* and *PS* subtend angles α , β , γ at a point on the ground distance *x* from the pole. If *PQ* = *a*, *PR* = *b*, *PS* = *c* and $\alpha + \beta + \gamma = 180^{\circ}$ then x^2 is equal to

