1. In measuring the radius of a circle, an excess error of 8% is made. Find the resultant percentage error in the area of the circle.  
   (A) 8%  
   (B) 16.64%  
   (C) 16%  
   (D) 8.64%
2. The edge of a cube is measured 5% less than the actual value. Find the percentage error in the volume computed.  
   (A) 14.25% decrease  
   (B) 15% decrease  
   (C) 10% decrease  
   (D) 12.5% decrease
3. The length of a rectangle is over-measured by 12% while the breadth is under-measured by 10%. Find the net percentage error in the computed area.  
   (A) 1.2% excess  
   (B) 2.8% deficit  
   (C) 22% deficit  
   (D) 0.8% deficit
4. The base of a triangle is measured 6% in excess and its height 4% in excess. Find the percentage error in the area.  
   (A) 10.24% excess  
   (B) 10% excess  
   (C) 9.76% excess  
   (D) 6% excess
5. The diameter of a sphere is measured with a 3% deficit. Find the percentage error in the volume calculated using that diameter.  
   (A) 6% deficit  
   (B) 9% deficit  
   (C) 8.73% deficit  
   (D) 3% deficit
6. A cylinder’s radius is measured 7% in excess and its height 5% in deficit. Find the approximate percentage error in its volume.  
   (A) 1.35% excess  
   (B) 1.35% deficit  
   (C) 2.65% excess  
   (D) 12% deficit
7. In a right circular cone, the radius is under-measured by 4% while the height is over-measured by 9%. Find the percentage error in the volume.  
   (A) 4.36% excess  
   (B) 4.36% deficit  
   (C) 5.36% excess  
   (D) 5.36% deficit
8. The sides of a rectangle are measured with independent percentage errors of +x% and −y%. Which option gives the percentage error in area, correct up to second-order terms?  
   (A) x − y  
   (B) x + y  
   (C) x + y + (xy/100)  
   (D) x − y − (xy/100)
9. A square’s side is measured with an excess error of p%. Which option gives the percentage error in its diagonal, correct up to second-order terms?  
   (A) p  
   (B) p + (p^2/200)  
   (C) 2p  
   (D) p − (p^2/200)
10. A sphere’s radius is over-measured by r%. Which option gives the percentage error in its surface area, accurate up to second-order terms?  
    (A) 2r  
    (B) 2r + (r^2/100)  
    (C) 4r  
    (D) r + (r^2/100)