11. $\frac{2}{3}$ of the line from middle of the base to the vertex.
12. $\frac{8}{17}$ of the median from the base.
13. $1\frac{3}{21}$ of the diagonal from that corner.
14. $\frac{7}{15}$ of the median from the base.
15. In line joining their centres at a distance of 1 ft. $8\frac{1}{4}$ inches from the centre of the hole.
16. In line joining centres 2 inches from the centre of the larger circle.
18. Centre of hole 16 inches from centre of disc.
19. Distant $\frac{\sqrt{2}}{14}$ of the radius bisecting the angle between the two radii from the centre.
20. $\frac{14}{19\frac{1}{4}}$ inches from centre of plate in line joining centre of plate with centre of hole.

EXERCISE XXVI. Page 143.

1. 6 inches.
2. 10 inches from the 12 lb. mass.
3. $4\frac{2}{3}$ inches from the end.
4. $8\frac{1}{2}$ inches from the 7 lb. mass.
5. 15 inches from end.
6. $28\frac{1}{3}$ ft. from first man.
7. $6\frac{2}{3}$ feet from 12 lb. mass.
8. $3\frac{1}{4}$ feet from 1 lb. mass.
9. 3.26 in. from the top.
10. 3.3 inches from the base.

EXERCISE XXVII. Page 146.

1. $\frac{2}{5}$ of diagonal from 2 lb. mass.
2. OG = $\frac{1}{4}$ OD.
3. 4.34 inches.
4. $\frac{1}{4}$ of the side of the square.
5. 3.6 feet nearly.
6. 7.8 inches nearly.
7. $8\frac{1}{3}$ in.; $11\frac{1}{3}$ in.
16. On the diameter of the circle drawn from angular point at which no weight is placed at a distance $\frac{8}{15}$ of diameter from that point.
17. 9 inches.

EXERCISE XXVIII. Page 152.

5. 60°.
7. 3.
9. $3\frac{1}{3}\frac{1}{3}$ ft.
10. 120.
11. 10.
13. $3\sqrt{3}$ feet.
15. $5(\sqrt{3}-1)$ cm.
16. $\text{Tan}^{-1}\frac{1}{2}$.
17. $\text{Tan}^{-1}\frac{3}{5}$; $\tan^{-1}\frac{3}{5}$.
18. 10 kgm.
19. 50 pounds.
20. 120 pounds.
21. $\text{Tan}^{-1}\frac{8}{15}$.
24. $\frac{W}{6}$.
25. $a\sqrt{3}$ where a = side of square.