

IX b. p. 133.

1. 314·16 sq. in.
2. 11·65 cms.
3. 8·38 sq. ft., 1·45 sq. ft.
4. 2165 miles.
5. 860000 miles.
6. 1·57'.
7. 21·3 miles.
8. 34·8 miles.
11. ·00582.
14. 57·3 in.
15. 31·416 in., 38·9 sq. in.

MISCELLANEOUS EXAMPLES G. p. 134.

1. 3560, 2517 miles.
2. 54 ins.
3. 29 ft.
5. 9° 15' 56 ins.
6. 0, 3 cm., 3 cm., 1, 1, ·0874 radians,
 $\sin 5^\circ$, ·0875 = $\tan 5^\circ$.
7. 645 miles per hr.
8. 54 ft.
9. 3·73 cms.
10. 11 miles.
11. $AP' = 2r \sin \frac{x}{2}$. Describe a circle whose radius is the distance from A to graduation 60° . An angle of x° is subtended at the centre of the circle by a chord whose length is the distance from A to the graduation x .
12. 26·7 yds.
13. $90^\circ 29'$, 84·5 ft.
14. ·1587.
15. 30·5 miles.
16. ·007272.
17. (i) 2092, (ii) 1162, (iii) 1168.
19. 78·4 chains.
20. 75·75 yds.
24. $\sin (60 - \theta) = \frac{3\sqrt{3} - 2}{8}$, $\theta = 36^\circ 24'$.
25. $R = 1·23$, $h = 3·8$ ft.
26. $b \cos \theta - a \sin \theta$.
27. $x = a \cos \theta$, $y = a \sin \theta$.
28. $r \cos \theta = \frac{a + \beta}{2}$.
29. $\tan \frac{C}{2} = \frac{4}{7}$.
30. 69° .

X a. p. 146.

1. $35^\circ 16'$.
2. 60° .
3. 7·810 in., $39^\circ 48'$.
4. $27^\circ 19'$, $20^\circ 8'$.
5. $33^\circ 4'$.
6. (1) 11·47 in. (2) 2·97 in. (3) $8^\circ 32'$.
7. 45° , $\frac{a\sqrt{2}}{2}$.
8. $23^\circ 56'$.
9. 5·57 ft., $29^\circ 30'$.
10. 7·27 in., $37^\circ 18'$.
11. $54^\circ 44'$, 2·89 in.
12. $12^\circ 20'$.
13. 5475 ft., $12^\circ 40'$.
14. 31° , $64^\circ 37'$, $73^\circ 24'$.
16. 159·15 sq. ft.
17. $\sqrt{38}$, $\sqrt{29}$, $\sqrt{13}$ ft.