

ANSWERS TO EXERCISES

EXERCISE I.

1. 0.3168. 2. 7. 3. 5. 4. 313.632.

EXERCISE II.

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|--------------------------------------|----------------|
| 1. 3.141593 m. | 2. 7.95775 ft. |
| 3. 1.00000; 1.0000000. | 4. 326.419. |
| 5. 0.062 in. | 6. 2.582. |
| 7. 0.4342945. | 8. 57.2957805. |
| 9. 101.369. | 10. 42.535. |
| 11. 606.094; 1 hr. 38 min. 59.7 sec. | 12. 325.292. |

EXERCISE III.

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| 1. 0.632477. | 2. 0.0002635. |
| 3. $26^{\circ} 7' 36''.8$. | 4. 0.30717 in. |
| 5. 101 ft. 4.4 in. | 6. 0.009865; 0.99962. |
| 7. 54.88 ft. | 8. $0^{\circ}.8247$ or $49' 29''$ nearly. |
| 9. 8 ft. 11.43 in. | 10. 412.5 ft. |
| 11. 1082.3 ft. | 12. 343.88 m. |
| 13. 3961.7 m. | 14. 18.52 m. |

EXERCISE IV.

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|---------------------------|-------------------------------------|--------------------------------------|
| 1. (ii) $a \sec \theta$. | (iii) $a \sin \theta$. | (iv) $a \sin \theta \cos \theta$. |
| (vi) $a \cos \theta$. | (vii) $a \cos^2 \theta$. | (viii) $a \sin^2 \theta$. |
| (ix) $a \sin^2 \theta$. | (x) $a \sin^2 \theta \cos \theta$. | (xi) $a \sin^2 \theta \tan \theta$. |
| 2. (i) 10 ft. | (ii) 17.32 ft. | (iii) 8.66 ft. |

EXERCISE V.

1. 0.4472; 0.8944; 1.1180. 2. 1.1339; 0.6614; 1.5119.
 3. 0; ∞ ; ∞ . 4. 1; $\sqrt{2}$; ∞ .
 5. $1 / \sin \varphi$. 6. 0.8660; 1.7321. 8. 0 or 1.