

LXXVI a. Pages 253-268.

- (1) $\sin A = \frac{1}{2}$, $\cos A = \frac{1}{2}$. (8) $A = n \times 180^\circ$; or, $360^\circ \pm 60^\circ$.
 (6) 4227.47 feet.
 (9) $30^\circ, 60^\circ, 90^\circ, 120^\circ$, etc. have for sine $\frac{1}{2}, \sqrt{\frac{3}{4}}, 1, \sqrt{\frac{3}{4}}, \frac{1}{2}, 0, -\frac{1}{2}, -\sqrt{\frac{3}{4}}, -1, -\sqrt{\frac{3}{4}}, -\frac{1}{2}$ respectively.
 (12) The other sides are 765.4321 ft.; 1006.6 ft.
 (15) $30^\circ, 60^\circ, 90^\circ$, etc. have for $\tan \frac{1}{2}\sqrt{3}, \sqrt{3}, \infty, -\sqrt{3}, -\frac{1}{2}\sqrt{3}, 0, \frac{1}{2}\sqrt{3}, \infty, -\sqrt{3}, -\frac{1}{2}\sqrt{3}$ respectively.
 (17) $\frac{168}{193}, \frac{168}{195}, \frac{32592}{193 \times 195}$. (19) $\sec A = \frac{2}{3}\sqrt{2}$.
 (21) $\theta = \frac{1}{2}(2n+1)\pi$. (22) $\cos 5a = 16 \cos^5 a - 20 \cos^3 a + 5 \cos a$.
 (23) Both signs negative. (24) $\frac{31}{33}$
 (25) $\frac{1}{10} A$ radians; 5.72956° .
 (26) sine, $\frac{1}{2}$; tan, $\frac{1}{2}$; cot, $\frac{2}{1}$; cosec, $\frac{2}{1}$; sec, $\frac{2}{1}$.
 (31) $\frac{1}{2} \theta$ deg.; 19.09854° . (36) $C = 18^\circ, a = c = \frac{2}{\sqrt{(10+2\sqrt{5})}}$.
 (37) -1320° . (38) $-\frac{1}{2}\sqrt{2}$. (39) $(2n+1)\pi$; or, $2n\pi \pm \frac{1}{2}\pi$.
 (41) 1 foot, $120^\circ, 30^\circ$; or 2 feet, $60^\circ, 90^\circ$. (42) $104^\circ 28' 39''$.
 (43) -630° . (44) $-\frac{1}{2}\sqrt{5}$. (46) $n\pi$; and $2n\pi \pm \frac{1}{2}\pi$.
 (48) $\frac{1}{2}\{\sqrt{6} \pm \sqrt{2}\}$ and $15^\circ, 135^\circ$; or, $105^\circ, 45^\circ$.
 (49) $9^\circ; 286^\circ.28'.41.16''; \frac{1}{2}$.
 (52) (i) $n\pi \pm \frac{1}{2}\pi$. (ii) $\frac{1}{2}n\pi \pm \frac{1}{2}\pi$, or $n\pi + (-1)^n \frac{1}{2}\pi$.
 (53) $37\frac{1}{2}$ sq. ft. (54) $40^\circ.29'.19.85''$.
 (55) $\frac{1}{10}\pi; \frac{1}{5}\pi; \frac{1}{2}\pi$. (56) $\tan a = 4\sqrt{3}$, cosec $a = \frac{1}{2}\sqrt{3}$.
 (58) (i) $n\pi \pm \frac{1}{2}\pi$. (ii) $\frac{1}{2}n\pi \pm \frac{1}{2}\pi$; or, $2n\pi \pm \frac{1}{2}\pi$.
 (59) $2\sqrt{14}$ sq. ft. (60) $38^\circ.25'.32.725''$.
 (61) 1.2 radians = 76.39416s.
 (64) The proper formula is $+\sqrt{(1+\sin A)} + \sqrt{(1-\sin A)}$.
 (66) 192 ft., 185 ft. and 9234 sq. ft.
 (67) 2.3 radians = 131.779926s.
 (69) The proper formula is $-\sqrt{(1+\sin A)} - \sqrt{(1-\sin A)}$.
 (72) $78^\circ 10', 70^\circ 30', 9234$ sq. ft.
 (73) $\frac{1}{5}\pi; \frac{2}{5}\pi; \frac{3}{5}\pi; \frac{4}{5}\pi; \frac{1}{2}\pi$.
 (76) $(2n \pm \frac{1}{2})\pi$, or $(2n \pm \frac{1}{2})\pi$. (78) $135^\circ, 15^\circ$; or $45^\circ, 105^\circ$.
 (79) $\frac{1}{5}\pi; \frac{2}{5}\pi; \frac{3}{5}\pi; \frac{4}{5}\pi; \frac{1}{2}\pi; \frac{3}{2}\pi$. (81) $(2n \pm \frac{1}{2})\pi$.
 (84) 7 ft.; $\sqrt{19}$ ft.; $\frac{1}{2}\sqrt{3}$ sq. ft.
 (88) 1035.43 ft.; 765.4321 ft.; 66° . (89) 6.981 feet.
 (90) $\frac{1}{2}; -\frac{1}{2}$. (91) $n\pi + (-1)^n \frac{1}{2}\pi$. (94) 321.0793.
 (95) 13.751 ft. (96) $\frac{1}{2}$. (97) $2n\pi \pm \frac{1}{2}\pi$.