$P(t) = -5\cos(2\pi t) + 5$ **68**

$AMP = |-5| = 5$

$MID = 5$

$P = \frac{2\pi}{2\pi} = 1$

$3.5 = -5\cos(2\pi t) + 5$

$-1.5 = -5\cos(2\pi t)$

$\frac{-1.5}{-5} = \cos(2\pi t)$

$0.3 = \cos(2\pi t)$

$\cos^{-1}(0.3) = 1,266103672$

$\pi - \alpha = 1,875398328$

$2\pi - \alpha = 5,017081639$

$\alpha = 72,54$

$\beta = 107,457$

$\theta = 287,457$

$\alpha \times \frac{1}{2\pi} = 3.5$ ✓

$LD = x = 0.201506591$

$-4\cos(5x) + 1 = 1$ **69**

$\cos(5x) = \frac{-1-1}{4}$

$\cos(5x) = \frac{-2}{4} = -\frac{1}{2}$

$\cos^{-1}(-\frac{1}{2}) = 2.094395102$

$\pi - \alpha = 1.047197551$

$\pi - \alpha = 4.188790204$

$\pi + \alpha = 5.235987756$

$\alpha = 120°$

$\theta = 240°$

$x = \frac{\alpha}{5} + N \cdot \frac{2\pi}{5}$

$120 = \frac{\pi}{3} \times 3$

$\frac{\pi}{6} \times 4 = 120$

$\frac{\frac{2\pi}{3}}{\frac{5}{2}} + N \cdot \frac{2\pi}{5} = x$

$\frac{4\pi}{15} + N \cdot \frac{2\pi}{5} = x$

$-4\cos(5x) + 1 = 1$

$-4\cos(5x) = 1 - 1$

$\cos(5x) = \frac{1-1}{-4}$

$\cos^{-1}(0) = \frac{\pi}{2}$

$\pi - \frac{\pi}{2} = \frac{\pi}{2}$

$x = \frac{-\frac{\pi}{2} + 2\pi + N}{5}$ ✓

$x = \pm\frac{\pi}{10} \cdot \frac{2\pi}{5} + N$

$\sin(x) = -1$ **70**

$= 0.775397447$

$\alpha = -44.42100400°$

$\beta = 2.30629516$

$LD\ 135.572996°$

$\theta = 2.466185$

$\theta = 234,42204$

$x = -44 + N \cdot 360$

$x = \frac{\beta}{\alpha} + N \cdot 360$

$\cos(165) = 120 + 45$ **71**

$\cos(165) = \cos(120) + \cos(45)$

$\frac{-1}{2} \cdot \frac{\sqrt{2}}{2} - \frac{1}{2} \cdot \frac{\sqrt{2}}{2}$

$-\frac{\sqrt{2}}{4} - \frac{\sqrt{6}}{4}$ ✓

$\left(\frac{3\pi}{2}, \frac{9\pi}{2}\right)$ **72**

$\sin(x) = 0.95$

$\sin^{-1}(0.95) = 1,25235$

$\pi - \alpha = 1,812356766$

$\sin^{-1}(0.65) = 0,7075$

$\pi - \alpha = 2,434002222$

$< 4.7 < 14.137$

$\alpha + N \cdot 2\pi$

$\alpha + 1 \cdot 2\pi = 1.9907$

$\alpha + 2 \cdot 2\pi = 13.2738$

$\beta + N \cdot 2\pi$ ✓

$2\pi = 8.7277$

$H(6) = -10\cos\left(\frac{2\pi}{360}t\right) + 10$ **73**

$16cm = -10\cos\left(\frac{2\pi}{360}t\right) + 10$

$\frac{6}{-10} = \cos\left(\frac{2\pi}{360}t\right)$

$\cos^{-1}(-0.6) = 2.214297444$

$\pi - \alpha = 0.927295218$ ✓

$\alpha \times \frac{360}{2\pi} = 126.8698$

$16\cos(8x) - 2 = 6$ **74**

$\cos(8x) = \frac{6+2}{16}$

$\cos(8x) = \frac{8}{16} = \frac{1}{2}$

$\cos^{-1}(\frac{1}{2}) = 1,047197551$

$\pi - \frac{\pi}{3} = \frac{2\pi}{3} = \beta$

$x = \frac{\frac{\pi}{3} + 2\pi \cdot N}{8}$

$x = \frac{\pi}{24} + \frac{\pi}{4} \cdot N$

$\alpha = 60$

$\beta = 120$

$\theta = 300$

$\alpha = -60$

$\theta = 3,235987756$

$\theta = 2\pi - \frac{\pi}{3} = \frac{5\pi}{3}$ ✓

$\sin(x) = 1$ **75**

$\sin^{-1}(1) = \frac{\pi}{2}$

$\pi - \alpha = \frac{\pi}{2}$

$90° + N \cdot 360$ ✓

$(180°, 720°)$ **76**

$\cos(x) = -0.4$

$\cos^{-1}(0.4) = 1,982313$

$\pi - \alpha = 1,159279448$

$\alpha = 113,57817848$

$\beta = 66,422182152$

$2\pi + \alpha = -4.300572213$

$\theta = 246,421922$

$-\alpha + N \cdot 360$

$-\theta + N \cdot 360$

$-\alpha + N \cdot 360$

$L\ 1\ 246,421922$

$L\ 2\ 606,421922$

$-\theta + N \cdot 360$

$2\ 473,578179$

$\cos\left(\frac{17\pi}{12}\right)$ **77**

$\frac{17\pi}{12} = \frac{120° + 135°}{\frac{\pi}{3} + \frac{\pi}{4}}$

$\frac{17\pi}{12} = \frac{4\pi}{12} + \frac{3\pi}{12}$

$\cos(a+b) =$

$\frac{\sqrt{6}}{2} \cdot \frac{\sqrt{2}}{2} - \frac{1}{2} \cdot \frac{\sqrt{2}}{2}$

$= \frac{\sqrt{6} - \sqrt{2}}{4}$

$\cos(120 + 135)$

$60 + 45$

$255\ (-)$

$-1\left(\frac{\sqrt{6} - \sqrt{2}}{4}\right)$

$\frac{-\sqrt{6} + \sqrt{2}}{4}$ ✓

78

$(3x+30)$

$x = \frac{180 - 30}{3} = \frac{150}{3}$

$x = 18.75 = \frac{75}{4}$

$180 - 3x + 30 = 0$

$-3x = -180 - 30$

$x = \frac{110 - 30}{3} = \frac{80}{3}$

$x = 10$

$\cos\left(\frac{2\pi}{3}\right) = -\frac{1}{2}$ **79**

$\sin\left(\frac{2\pi}{3}\right) = \frac{\sqrt{3}}{2}$ ✓

80

$\theta = 26$

$x = 90 - 26 = 64$ ✓

81

$\sin(43) = \frac{7}{N}$

$N = \frac{7}{\sin(43°)} = 9,3272$

$\cos(43) = \frac{7}{N}$

$\cos(43°)$

$\tan(43) = \frac{7}{N}$

$N = \frac{7}{\tan(43)}$

$N = 7,506538797$

82

$x + 10$

$90 = x + 2x + (x + 10)$

$4x = 90 - 10$

$x = \frac{80}{4} = 20$ ✓

83

$\theta = (x + 12°)$

$\alpha = 100°$

$180 = 100 + 2x + 12$

$2x = 180 - 100 - 12$

$x = \frac{68}{2} = 34$

84

$(4x + 30)$

(130)

$180 = (30) + (4x + 30)$

$4x = 180 - 30 - 30$

$x = \frac{100}{4} = 25$ ✓

85

$90 = 35 + 5x$

$5x = 90 - 35$

$x = \frac{55}{5} = 11$ ✓

$x = 90 - 35 = \frac{55}{5}$

86

$180 = 80 + 5x$

$5x = 180 - 80$

$x = \frac{100}{5} = 20$ ✓

87

$180 - 4x = 180 - 45 - 15$

$-4x = -45 - 15$

$x = \frac{-60}{-4} = 15$ ✓

88

$90 = x + 42 + 3x$

$4x = 90 - 42$

$x = \frac{48}{4} = 12$ ✓

89

$90 = 3x + 75$

$x = \frac{105}{3} = 35$ ✓

$180 = 3x + 75$

$x + 45$

$180 - (x + 45) = 180$

$-x = 180 - 135$

$-x = 45$

$180 = 180 - (x + 45)$

$180 = 180 + x + 45$

$x = 45$

$60 = x + 45$ ✓

$x = 60 - 45 = 15$

90

$\theta = x + 54$

$90 = 5x + x + 54$

$6x = 90 - 54$

$x = \frac{36}{6} = 6$ ✓

91

$180 = 3x + 45$

$x = \frac{135}{3} = 45$ ✓

92

$120 = 3x$

$x = \frac{120}{3} = 40$

93

$90 = 8x + 30$

$x = \frac{60}{8} = 5$ ✓

94

$3x = 180 - 45$

$x = \frac{135}{3} = 45$ ✓

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