$\left(\frac{2\pi}{3}, -8,2\right) + (\nu; 3,4) = -$

$\frac{11,4 - (-5,3)}{2} = \frac{16,9}{\sqrt{2}} = 8,48$

$(-5,2) + 1,1 = -4,1$

MAX = 6,25 $(6,75) - 1,25 = 5,5$
MIN = 1,25 $\frac{5,5}{2} = 2,75 + 1,25 = 4$

6,7 − 4,1 = 2,6
MAX − AMP = MID

$\frac{13 - 2,4}{2} = \frac{10,6}{2} = 5,3$
MAX − MIN / 2 = MID
13 − 5,3 = 7,7
MAX − AMP = MID

1,8 − 4,2 = 2,4
MAX − AMP = MID

$\frac{2,5 + |-4,5|}{2} = \frac{7}{2} = 3,5$

$2,5 + (-4,5) = \frac{-2}{2} = -1$
MAX + MIN / 2 = MID

(−2,7) − (−10,1) = 9,4
MAX − MID = AMP

$\frac{(1,8) - (9,8)}{2}$ = AMP = $\frac{8}{2} = 4$

(5,8) − (3,8) = 2
MAX − MID = AMP

(13) + (2,4) = 7,7
$\frac{\text{MAX} + \text{MIN}}{2}$ MID 13 − 7,7 = 5,3

(6,75) − (2,75) = 4
MAX − MID = AMP

$\frac{(3,2) - (6)}{2}$ = AMP = 0,8
MAX − MIN / 2 = AMP
(3,2) − (−1,6) = $\frac{4,8}{2}$ = 2,4

(−3,4) + (1,2) = −2
(−3,4) + (1,2) = −4,6
(1,2) − (−3,4) = 4,6
MIN + AMP = MID
MID − MIN = AMP

$\frac{(1,4) - (-5,5)}{2} = \frac{16,9}{2} = 8,45$
MAX − MIN / 2 = AMP

9,2 − (−4,4) = 8,6
MID + (MIN) = AMP

$\frac{7,7 - (-6,7)}{2} = \frac{14,4}{2} = 7,2$

7 − 1,2 = 5,8
MID − (MIN) = AMP

$\frac{(-3,7) - (-11)}{2} = \frac{7,3}{2} = 3,65$

0,7 + 0,8 = 1,5

$\frac{2,5 + 4,5}{2} = \frac{7}{2} = 3,5$

7,2 − 3,8 = 3,4

$\frac{6,75 - 1,25}{2} = \frac{5,5}{2} = 2,75$

$f(x) = a\cos(bx+c) + d$

$y = \cos x$

if $a > 0$:
$y = a\cos x$

if $a < 0$
$y = |a|\cos x$

so:
$y = a\cos(bx+c) + d$
$= y = a\cos x = |a|$

$g(x) = 10\cos(6x - 1) + 4$
$= x = 10$

$y = 4\cos(Nx + L) + F$

1: $\cos(Nx + L) + F$

4: $4\cos(Nx + L + F)$

1 = (3,7; 5)

2 = (5,9; 5)

Period = 2,2

Period 1,23

Midline = $\frac{1}{4}$ period

Period = 2π [1 to 2 = π] [2 to 3 = 2π]

MAX 1 = $(\frac{\pi}{2}, 1)$ → MID = $(0, \pi)$

MIN 1 = $(\frac{3\pi}{2}, -1)$ MID = $(0, 2\pi)$

$y = \sin(x)$

Intersection 1 = π } MAX − MIN = Period / 2 = $\pi - 2\pi = \pi$

Intersection 2 = 2π

(5,9) − (2,7) = 2,2 (HALF − PERIOD)

2,2 × 2 = 4,4

$-\frac{1}{2}\pi - (-\frac{7}{8}\pi) = \frac{3}{2}\pi$

$-\frac{1}{2} \cdot \frac{7}{8}$

MIN = $-\frac{7}{8}\pi$

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

1 $(\frac{1}{4}, -2,2)$ = MAX

2 $(\frac{5}{4}, -8,3)$ = MIN

$\frac{3}{4} > \frac{1}{4}$

$(\frac{3}{4} - \frac{1}{4})2 = (\frac{2}{4})2 = \frac{4}{4} = 1\pi$

1 $(-\frac{3}{2}\pi, -7)$

2 $(\pi, -7$

$a < 0 = |a|$

$\pi = t \quad -\frac{2}{3}\pi < \pi$

$\frac{3}{3}\pi - (-\frac{2}{3}\pi) = \frac{5}{3}\pi$

$\frac{5}{3} \times 2 = \frac{10}{3}$

I (1,25, −2,75)

II (4,75; −6,25)

(Max − Min) × 4 = 4 MAS

4,75 − 1,25 = 3,5 × 4 = 14

I (1,5, 3,2)

II (4,7; 1,6)

4,7 − 1,5 = 3,2

3 = −2 − 6,4

(−10,7, −3) I

(−5,5, −3) II

−5,5 − (−10,7) =

I (8,7; 2)

II (6,2; 3,3)

8,7 − 6,2 = 2,5

2,5 × 4 = 10

Period in sinusoids
$y = a\cos(bx + c) + d$
$= \frac{2\pi}{|b|}$

$y = \cos x$ Period = 2π

Period = 4

$g(x) = -9\cos x(-\frac{\pi}{2}x - 6) + 8$

$f(x) = -4\cos(5x - 9) - 7$
Period = $0,4\pi$
$\frac{2\pi}{(5)} = 0,4\pi = 1,256637061$

$g(x) = -3\sin(-8x - 3) + 5$
Period = $0,25\pi$
$\frac{2\pi}{|-8|} = 0,25\pi$

$h(x) = 35\sin(4x - 2) + 3$
Period = $0,5\pi$
$\frac{2\pi}{|4|} = 0,5\pi$

$y = 8\cos(5\pi x + \frac{3\pi}{2}) - 9$
Period = $0,4\pi$
$\frac{2\pi}{|5\pi|} = 94$

$h(x) = -3\cos(\pi x + 2) + 6$
Period = 2
$\frac{2\pi}{\pi} = 2$

$y = -2\sin(\frac{\pi}{3}x - 4)$
Period = $\frac{2\pi}{\frac{\pi}{3}} = 3\pi$
$\frac{\pi}{3} = 3\pi$

$y = 45\sin(-2x + 7) - 1$
$\frac{2\pi}{|-2|} = \pi$

$y = -5(\cos(\frac{\pi}{3}x) + 3$
$\frac{2\pi}{|\frac{\pi}{3}|} = 16$

$y = 36(x - 7) + 2$
$\frac{2\pi}{|1|} = 2\pi$

$\frac{2\pi}{|\frac{-3\pi}{4}|} = \frac{8}{3}\pi$

$\frac{2\pi}{|\frac{-\pi}{2}|}$ Period = 4

$\frac{2\pi}{|1\ 21|} = \pi$

$\frac{2\pi}{|3\pi|} = \frac{2}{3}$

$\frac{2\pi}{|4\pi|} = \frac{2}{4}$

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

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

$\frac{2\pi}{1\frac{1}{2}|} = 4\pi$

$y = 15\sin(\frac{1}{2}) + 9$
Midline = 8
Amplitude = 15 = 1
8 + 1 = 9

$\frac{4\pi}{2} = \pi$ (π, 9)

$\frac{2\pi}{|5|} = 4/4 = 1$

$y = 55:1(\frac{\pi}{2}x) + 4$

MID = −4
AMP = |5| = 5
(1, 1)