

1. $\sin \theta = \frac{-15}{17}$ $\cos \theta = \frac{-8}{17}$

2. verify 3.a) $y = 2 \sin(x - \pi/6) + 1$
 $y = 2 \cos(x - 2\pi/3) + 1$

3b) $y = 3 \sin(x - \pi/3) - 2$
 $y = 3 \cos(x - 5\pi/6) - 2$

4. Final Table; eqn had 3 transformations

x	$y+1$
0	-1
$\pi/2$	1
π	3
$3\pi/2$	1
2π	-1

$P = 2\pi$

amp = 2

5. Final Table

$x - \pi/2$	$y - 2$
$-\pi/2$	-2
0	-1
$\pi/2$	-2
π	-3
$3\pi/2$	-2

2 transformations
 $P = 2\pi$ amp = 1

6. Final Table

$x + \pi/2$	$y + 3$
$\pi/2$	4
$5\pi/2$	3
$9\pi/2$	2
$13\pi/2$	3
$17\pi/2$	4

3 transformations
 $P = 8\pi$ amp = 1

7. Final Table

$x - \pi$	$y - 1$
$-\pi$	-1
$-\pi/2$	2
0	-1
$\pi/2$	-4
π	-1

3 transformations

$P = 2\pi$

amp = 3

8. Vertical shrink of $1/4$

$P = \pi$

θ	y
0	0
$\pi/2$	undef
π	0
$3\pi/2$	undef
2π	0

9. Horizontal shrink of $1/2$

$P = \pi/2$

θ	y
0	0
$\pi/4$	undef
$\pi/2$	0
$3\pi/4$	undef
π	0