TIPC
Ch
Sec 4.4 Review WS Answers

① $y = \sin \pi/4 (x-5)$ ② $y = 5 \sin 2/3 (x+2)$ (3-6 Need to be graphed Tables shown)

③

X	2y
0	0
2π	2
4π	0
6π	-2
8π	0

Extras: $(-2\pi, -2)$ $(10\pi, 2)$

④

X	-3y
0	-3
$\frac{1}{12}$	0
$\frac{1}{6}$	3
$\frac{1}{4}$	0
$\frac{1}{3}$	-3

Extras: $(5/12, 0)$ $(-1/12, 0)$

⑤

X	2/3 y
0	0
$\pi/4$	$-2/3$
$\pi/2$	0
$3\pi/4$	2/3
π	0

Extras $(5\pi/4, -2/3)$ $(-\pi/4, 2/3)$

⑥

X	4y
0	4
$\frac{1}{2}$	0
1	-4
$\frac{3}{2}$	0
2	4

Extras $(5/2, 0)$ $(-1/2, 0)$

⑦ amp = 2.5
Period = $\pi/3$
no phase shift

⑧ amp = 5
Period = $\pi/2$
phase shift: $\pi/8$ L

⑨ amp = 3
Period = 4π
no phase shift

⑩ amp = 5/3
Period = 2π
phase shift π R

⑪ Vertical reflection, horizontal stretch of 8 (Period now 16π)
Vertical translation 6U

⑫ Vertical shrink of $\frac{1}{6}$ (amp = 1/6), horizontal reflection, horizontal stretch of 5/2 (Period now 5π), phase shift 5R
Vertical translation 3D.

⑬ zeros: $x = -\pi/4$
$x = \pi/4$
$x = 3\pi/4$
$x = 5\pi/4$

max of 1/2 at $x = 0$
$x = \pi$

min of $-1/2$ at $x = \pi/2$

⑭ zeros: $x = 0$
$x = \pi/2$
$x = \pi$

max of 1 at $x = -\pi/4$
$x = 3\pi/4$

min of -1 at $x = \pi/4$
$x = 5\pi/4$

⑮ zeros: $x = -\pi$
$x = \pi$
$x = 3\pi$
$x = 5\pi$

max of 9 at $x = 0$
$x = 4\pi$

min of -9 at $x = 2\pi$