

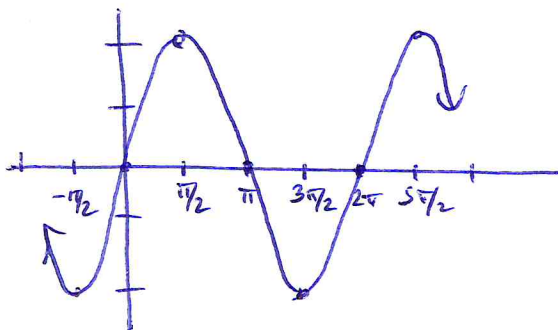
# Sine Function Practice

odds - Tables + graphs  
evens - tables only

13.  $y = 2 \sin \theta$

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

| $\theta$ | $y$ |
|----------|-----|
| 0        | 0   |
| $\pi/2$  | 2   |
| $\pi$    | 0   |
| $3\pi/2$ | -2  |
| $2\pi$   | 0   |



14.  $y = -2 \sin 4\theta$   $a = -2$   $b = 4$   $P = \frac{2\pi}{4} = \frac{\pi}{2}$

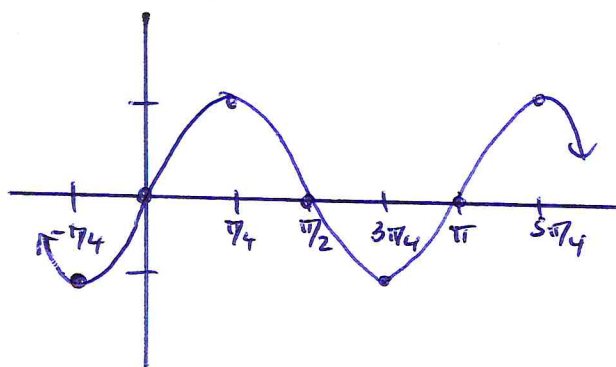
| $\theta$ | $y$ |
|----------|-----|
| 0        | 0   |
| $\pi/8$  | -2  |
| $\pi/4$  | 0   |
| $3\pi/8$ | 2   |
| $\pi/2$  | 0   |

16.  $a = 3$   $b = \frac{1}{2}$   $P = \frac{2\pi}{\frac{1}{2}} = \frac{2\pi \cdot 2}{1} = 4\pi$

| $\theta$ | $y$ |
|----------|-----|
| 0        | 0   |
| $\pi$    | 3   |
| $2\pi$   | 0   |
| $3\pi$   | -3  |
| $4\pi$   | 0   |

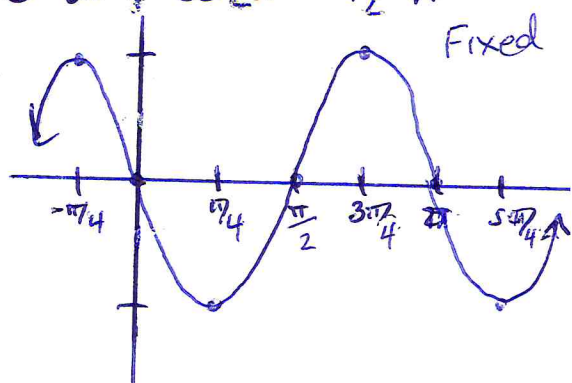
15.  $y = \sin 2\theta$   $a = 1$   $b = 2$   $P = \frac{2\pi}{2} = \pi$

| $\theta$ | $y$ |
|----------|-----|
| 0        | 0   |
| $\pi/4$  | 1   |
| $\pi/2$  | 0   |
| $3\pi/4$ | -1  |
| $\pi$    | 0   |



17.  $y = -2 \sin \theta$   $a = -2$   $b = 2$   $P = \frac{2\pi}{2} = \pi$

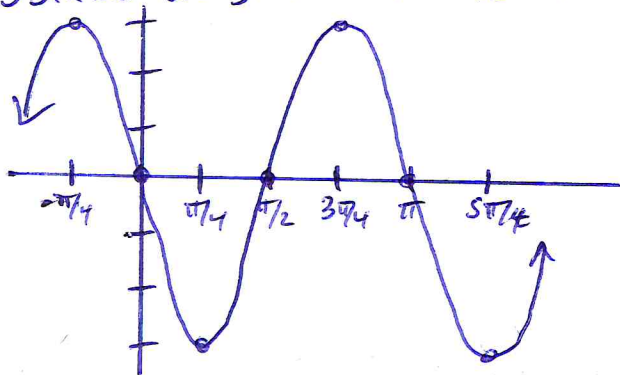
| $\theta$ | $y$ |
|----------|-----|
| 0        | 0   |
| $\pi/4$  | -2  |
| $\pi/2$  | 0   |
| $3\pi/4$ | 2   |
| $\pi$    | 0   |



Fixed

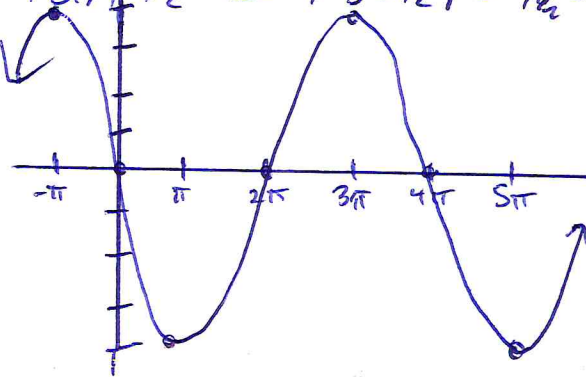
19.  $y = -3 \sin 2\theta$   $a = -3$   $b = 2$   $P = \frac{2\pi}{2} = \pi$

| $\theta$ | $y$ |
|----------|-----|
| 0        | 0   |
| $\pi/4$  | -3  |
| $\pi/2$  | 0   |
| $3\pi/4$ | 3   |
| $\pi$    | 0   |



21.  $y = -4 \sin \theta/2$   $a = -4$   $b = 1/2$   $P = \frac{2\pi}{1/2} = 4\pi$

| $\theta$ | $y$ |
|----------|-----|
| 0        | 0   |
| $\pi$    | -4  |
| $2\pi$   | 0   |
| $3\pi$   | 4   |
| $4\pi$   | 0   |



18.  $y = -5 \sin 3\theta$   $a = -5$   $b = 3$   $P = \frac{2\pi}{3}$

| $\theta$ | 0 | $\frac{\pi \cdot 2}{3} = \frac{\pi}{3}$ | $\frac{\pi}{3}$ | $\frac{\pi}{2}$ | $\frac{2\pi}{3}$ |
|----------|---|-----------------------------------------|-----------------|-----------------|------------------|
| $y$      | 0 | -5                                      | 0               | 5               | 0                |

20.  $y = 4 \sin 5\theta$   $a = 4$   $b = 5$   $P = \frac{2\pi}{5}$

| $\theta$ | 0 | $\frac{\pi \cdot 2}{5} = \frac{\pi}{5}$ | $\frac{\pi}{5}$ | $\frac{3\pi}{10}$ | $\frac{2\pi}{5}$ |
|----------|---|-----------------------------------------|-----------------|-------------------|------------------|
| $y$      | 0 | 4                                       | 0               | -4                | 0                |