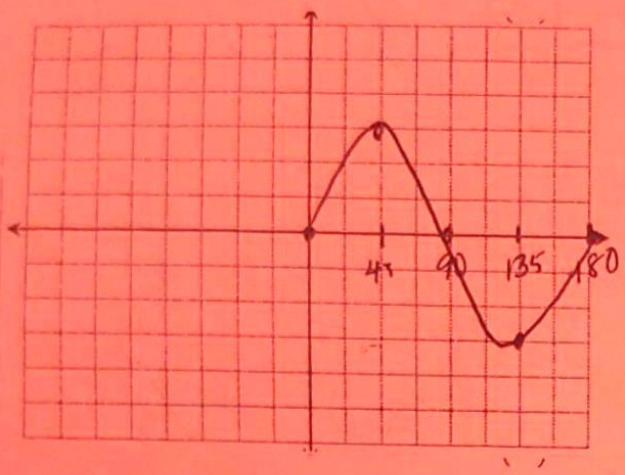
S:	0	1	0	-1	0
C:	1	0	-1	0	1
t:	0	/	0	/	0

Precalculus

Examples-Amplitude and Period Degrees

Using degrees, find the amplitude and period of each function. Be sure to include your 5 critical points. Then graph.

1) $y = 2\sin 2\theta$



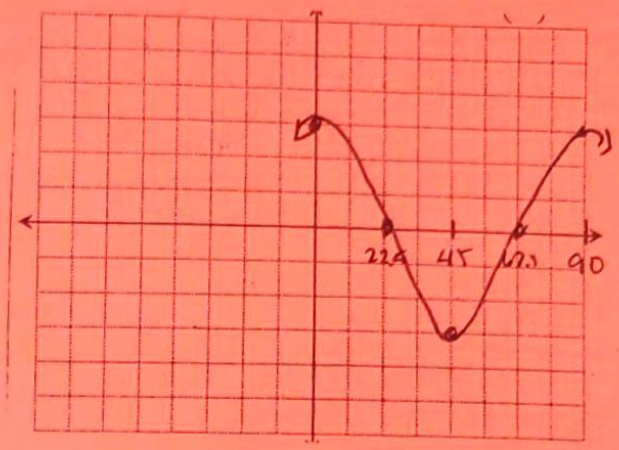
a = 2

pd = 180° 360/2 = 180

CP = 0 45 90 135 180

0 3 0 -3 0

2) $y = 3\cos 4\theta$



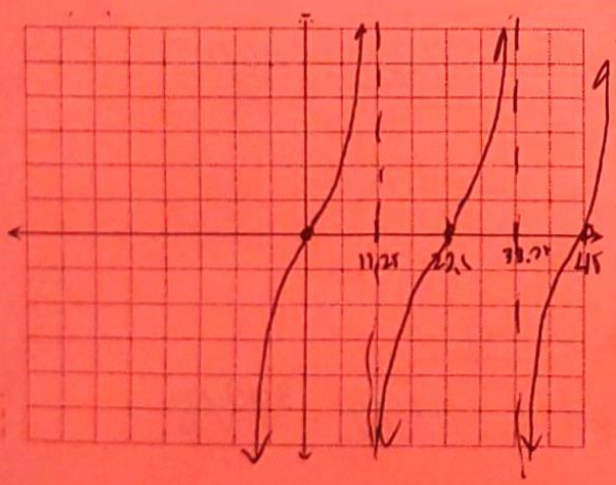
a = 3

pd = 90° 360/4 = 90

CP: 0 22.5 45 67.5 90

3 0 -3 0 3

3) $y = 2\tan 2\theta$



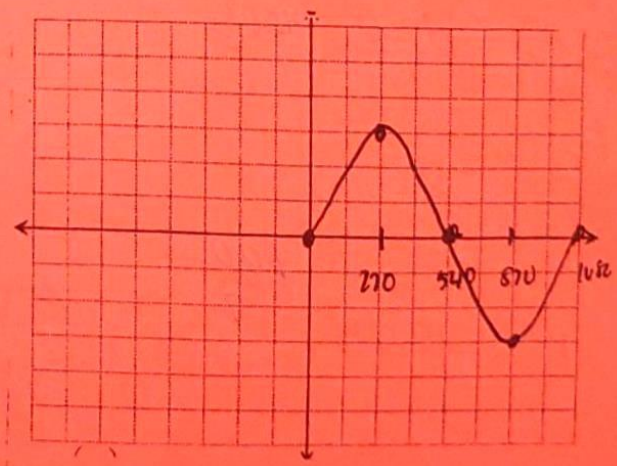
a = /

pd = 45° 180/4 =

CP: 0 / 0 / 0

0 11.25 22.5 33.75 45

4) $y = 3\sin \frac{\theta}{3}$



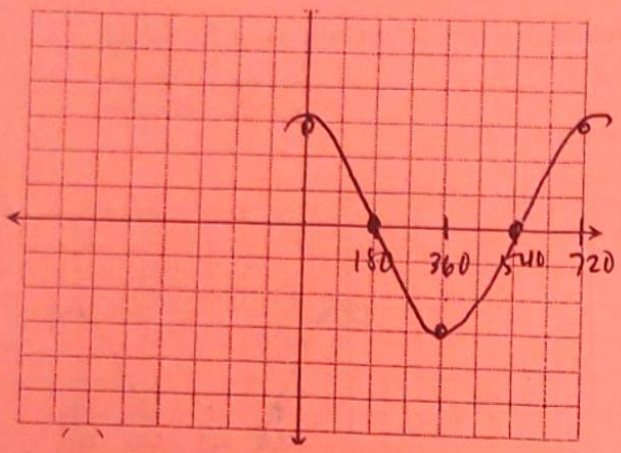
a = 3

pd = 1080 360/$\frac{1}{3}$ =

CP: 0 3 0 -3 0

0 270 540 810 1080

5) $y = 3\cos\frac{\theta}{2}$



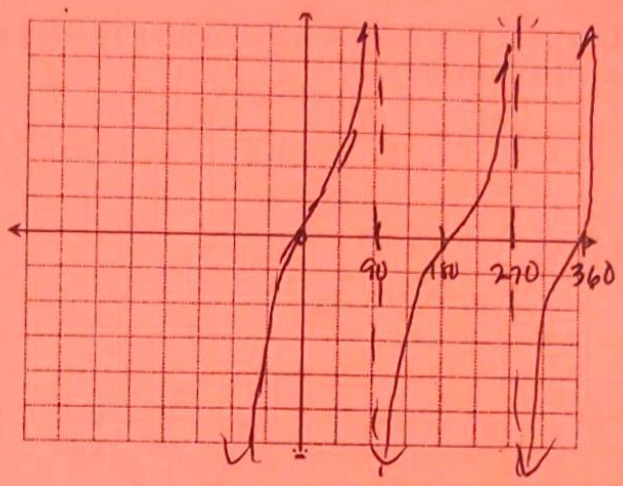
a = 3

pd = 720 $360/\frac{1}{2}$

CP: 3 0 -3 0 3

0 180 360 540 720

6) $y = 4\tan\frac{\theta}{2}$



a = —

pd = 360 $180/\frac{1}{2}$

CP = 0 — 0 — 0

0 90 180 270 360

Using degrees, find the amplitude and period of each function.

7) $y = 8\sin 3\theta$

a = 8

pd = 120 $360/3$

8) $y = 7\cos 5\theta$

a = 7

pd = 72° $\frac{360}{5}$

9) $y = 9\tan 7\theta$

a = —

pd = 25.7° $\frac{180}{7}$

10) $y = 9\sin\frac{\theta}{4}$

a = 9

pd = 1440° $360/\frac{1}{4} =$

11) $y = 6\cos\frac{\theta}{7}$

a = 6

pd = 2520 $360/\frac{1}{7}$

12) $y = \frac{1}{7}\cdot\tan\frac{\theta}{4}$

a = —

pd = 720 $\frac{180}{\frac{1}{4}}$