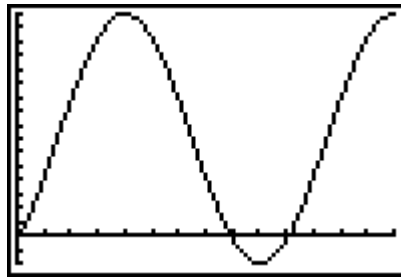


1) Steamboat Problem

```

Plot1 Plot2 Plot3
\Y1=9sin(2π(X-11
.5)/10)+7
\Y2=
\Y3=
\Y4=
\Y5=
\Y6=
    
```

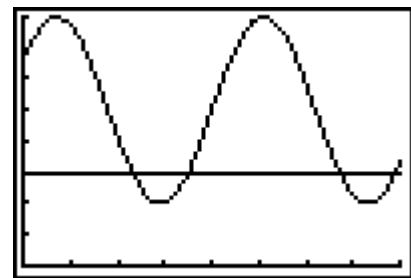
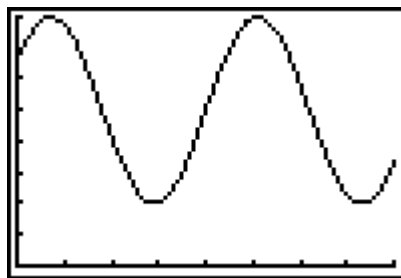


The weed was 14.3 m above the ground after 5 seconds.
 The weed was 4.2 m above the ground after 17 seconds.
 The piece of weed first entered the water after 7.9 s.

2) Fox Population Problem

```

Plot1 Plot2 Plot3
\Y1=300sin(2π(X-
4)/4.4)+500
\Y2=
\Y3=
\Y4=
\Y5=
\Y6=
    
```

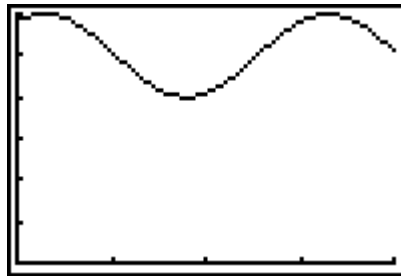


The population drops below 300 after 2.3 and 6.7 years.

3) Bouncing Spring Problem

```

Plot1 Plot2 Plot3
\Y1=10sin(2π(X-2
.55)/3)+50
\Y2=
\Y3=
\Y4=
\Y5=
\Y6=
    
```

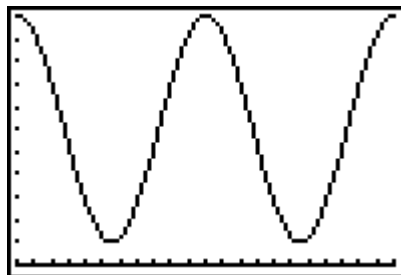


The distance of the weight above the ground is 43.3 cm after 17.2 s.

4) Sunspot Problem

```

Plot1 Plot2 Plot3
\Y1=50sin(2π(X-1
956.25)/11)+60
\Y2=
\Y3=
\Y4=
\Y5=
\Y6=
    
```



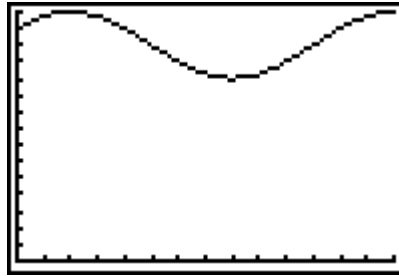
81 sunspots would be expected in 2001.

To check the validity of this trigonometric model, go to <http://sunspotcycle.com/>

5) Tide Problem

```

Plot1 Plot2 Plot3
\Y1=0.2sin(2π(X-
11)/12)+1.3
\Y2=
\Y3=
\Y4=
\Y5=
\Y6=
    
```

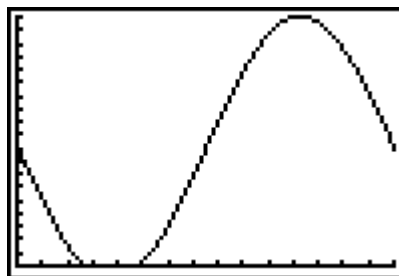


The estimated height at 4 pm 2 Oct is 1.4 m.
 The estimated height at 5 pm 3 Oct is 1.3 m.

6) Tidal Wave Problem

```

Plot1 Plot2 Plot3
\Y1=10sin(2π(X-7
.5)/15)+9
\Y2=
\Y3=
\Y4=
\Y5=
\Y6=
    
```

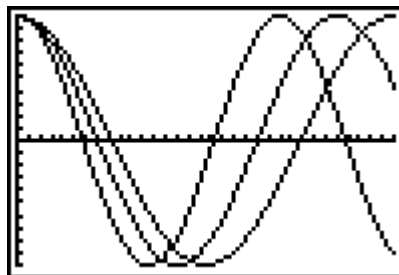


At 2 min the water height is 1.6 m.
 At 4 min the water height is 0 m.
 At 12 min the water height is 18.5 m.
 Between 2.7 min and 4.8 min, there is no water at the pier.

7) Biorhythm Problem

```

Plot1 Plot2 Plot3
\Y1=100sin(2π(X-
17.25)/23)
\Y2=100sin(2π(X-
21)/28)
\Y3=100sin(2π(X-
24.75)/33)
\Y4=
    
```

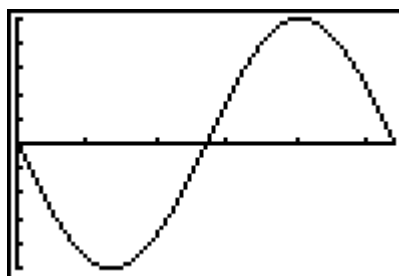


On day 33, the physical value will be -92 and the emotional value will be 43.

8) Shock-Felt-Around-the-World Problem

```

Plot1 Plot2 Plot3
\Y1=50sin(2π(X-2
7)/54)
\Y2=
\Y3=
\Y4=
\Y5=
\Y6=
    
```



The displacement after 21 s would be 32 m below the normal position.