

1. Suppose $f(x)$ is a periodic function with a period of 15.

Use this information to answer the following questions:

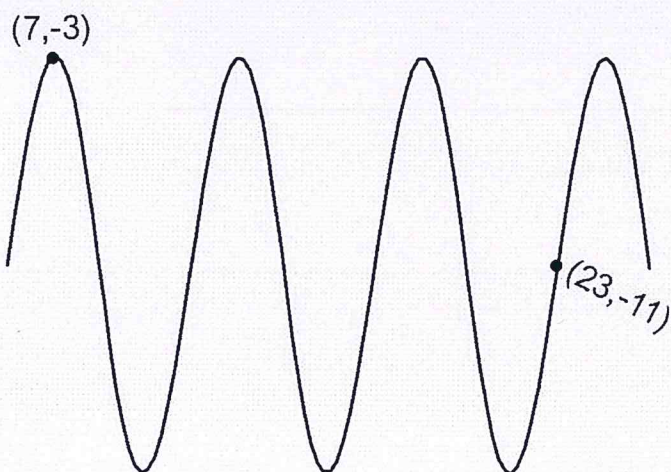
$$f(5) = -9 \text{ and } f(16) = 27$$

a) Find $f(-25)$

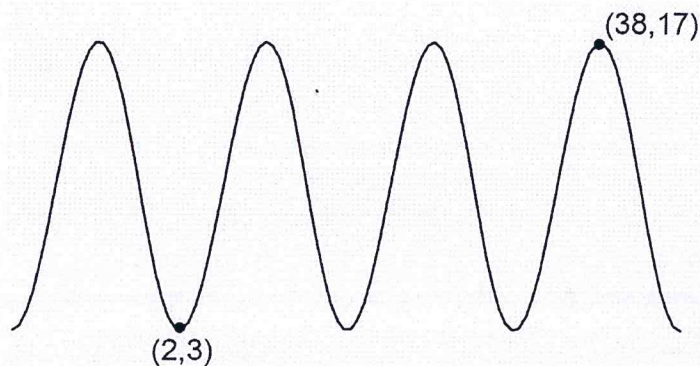
b) Find $f(76)$

2. For each of the periodic functions below find the EXACT period, amplitude, and equation of the midline.

a)



b)



1. Suppose $f(x)$ is a periodic function with a period of 15.

Use this information to answer the following questions:

$f(5) = -9$ and $f(16) = 27$

a) Find $f(-25)$

b) Find $f(76)$

$f(-25)$ is "coterminal"

with $f(5) \rightarrow \frac{5-25}{15} = 2$

Therefore,

$f(5) = f(-25) = -9$

$f(76)$ is "coterminal" with $f(16)$

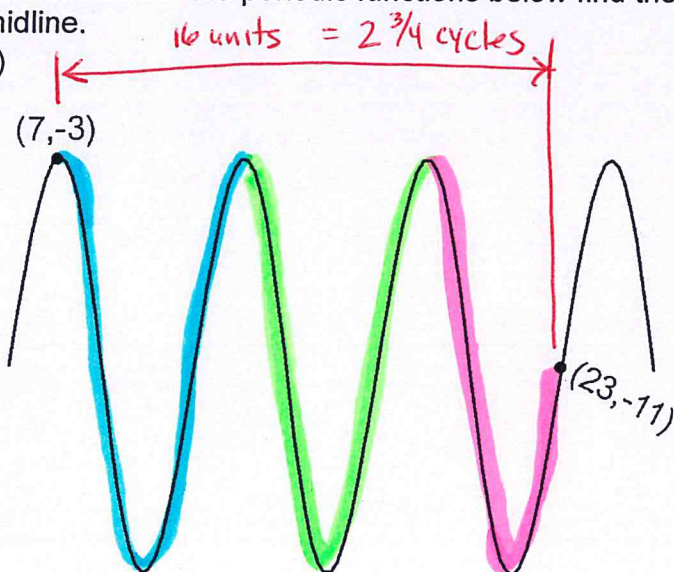
$\frac{76-16}{15} = 4$

Therefore,

$f(16) = f(76) = 27$

2. For each of the periodic functions below find the EXACT period, amplitude, and equation of the midline.

a)

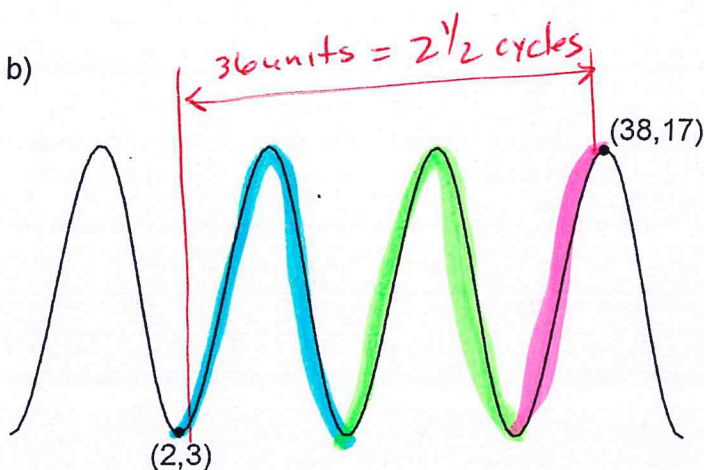


period = $\frac{16}{2\frac{3}{4}} = \frac{16}{\frac{11}{4}} = 16 \cdot \frac{4}{11} = \frac{64}{11}$

Amplitude = $-3 - -11 = 8$

midline: $y = -11$

b)



period = $\frac{36}{2\frac{1}{2}} = \frac{36}{\frac{5}{2}} = 36 \cdot \frac{2}{5} = \frac{72}{5}$

Amplitude = $\frac{17-3}{2} = 7$

midline: $y = \frac{17+3}{2}$
 $y = 10$