Trigonometry Worksheet (3)

Trigonometry Questions

Q1. Suppose $f(x)$ is periodic with period p. What is the period of $y = f(bx)$?

Q2. What is the period $y = |sin(x)|$?

Q3. What is the period $y = sin^2(x)$?

Q4. What is the period $y = sin(x)cos(x)$?

Q5. If $f(x) = sin(bx + c)$ has x-intercepts at

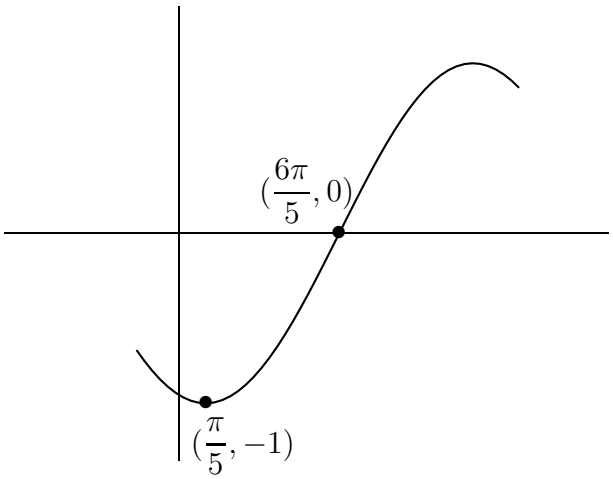
$$x = ..., -\pi, \frac{-6\pi}{13}, \frac{\pi}{13}, \frac{8\pi}{13}, ...,$$

is it possible to find parameters b and c using the given information? Explain.

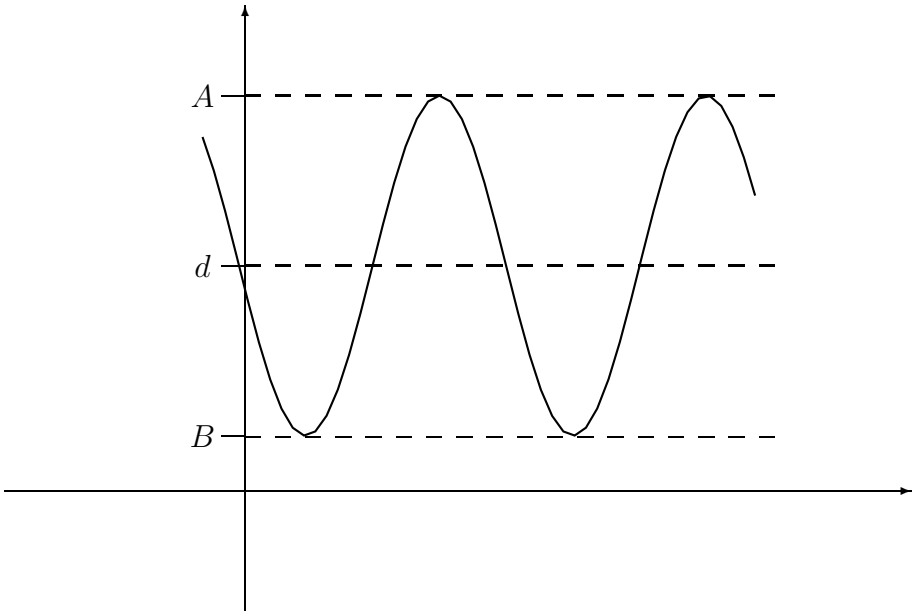
Q6. A curve of the form $y = sin(bx + c)$ has a minimum at $x = \pi/5$ and an x-intercept at $x = 6\pi/5$ as shown:

a) What is the period of the graph?

b) Find values for the parameters b and c such that b has a positive value and c has the smallest positive value.



Q7. The graph below is that of a function given by $y = asin(bx + c) + d$ where A and B are the maximum and minimum values of y.



a) Find expressions for A and B in terms of a and d (assume a is positive).

b) Find expressions for a and d in terms of A and B.

Q8. The graph of a function of the form $y = asin(bx + c) + d$ with a maximum at $x = 18/7$ and a minimum at $x = 46/7$ is shown below. Find the values of the parameters a, b, c and d. Find the smallest positive of c.