

3.1 Periodic Phenomena

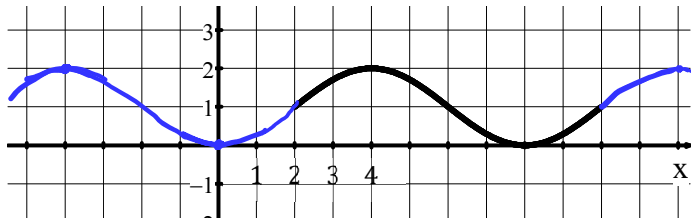
AP Precalculus

Solutions

3.1 Practice

The following graphs show one period of a periodic function. Sketch the rest of the graph on the given axes and answer any questions that follow.

1.



- a. Is the function increasing, decreasing or both on the interval $52 < x < 56$?

Decreasing

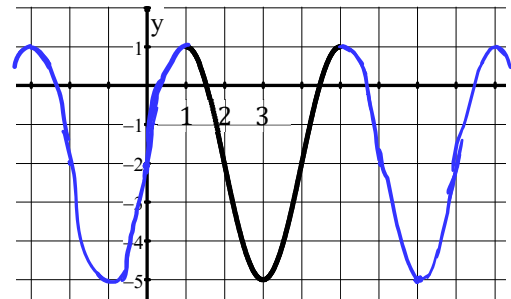
- b. Is the function concave up, concave down, or both on the interval $30 < x < 34$?

Concave up

- c. Is there a relative max, relative min, or neither at the point $x = 44$?

Relative max

2.



- a. Is the function increasing, decreasing or both on the interval $25 < x < 27$?

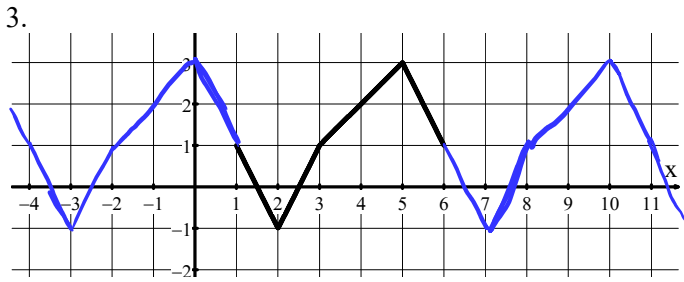
Decreasing

- b. Is the function concave up, concave down, or both on the interval $34 < x < 36$?

Concave up

- c. Is there a relative max, relative min, or neither at the point $x = 47$?

Relative min

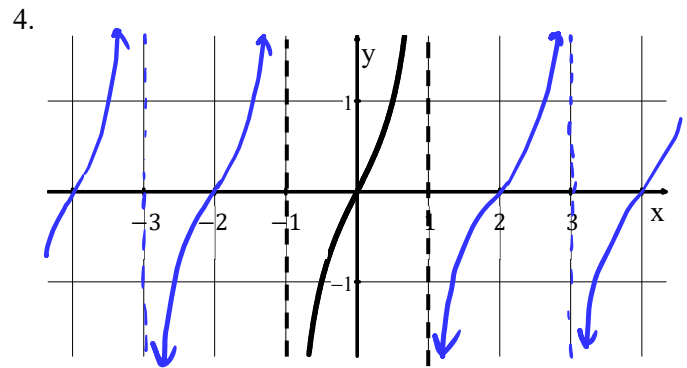


a. Is the function increasing, decreasing or both on the interval $22 < x < 23$?

Increasing

b. Is there a relative max, relative min, or neither at the point $x = 30$?

Relative max



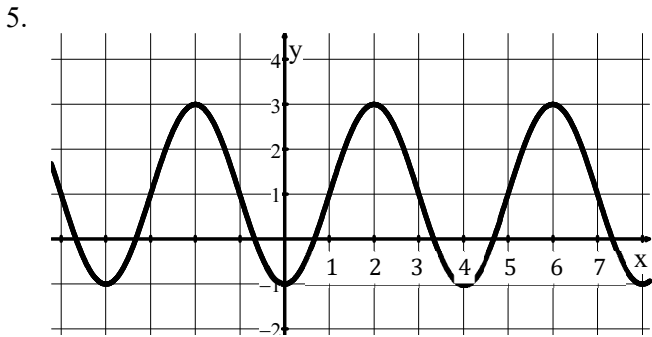
a. Is the function increasing, decreasing or both on the interval $37 < x < 39$?

Increasing

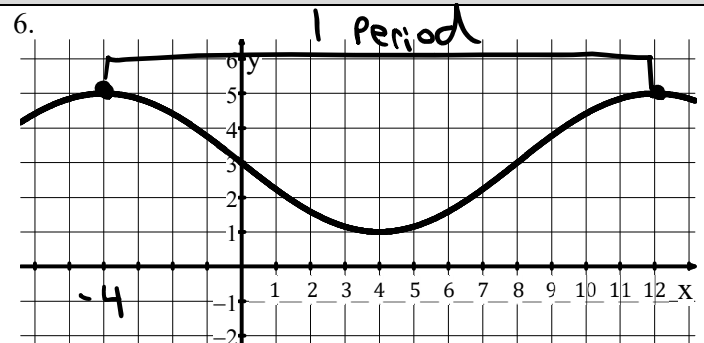
b. Is the function concave up, concave down, or both on the interval $27 < x < 28$?

Concave down

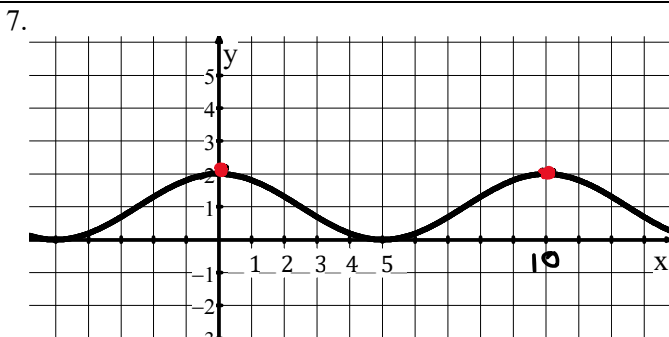
Identify the length of the period for each function.



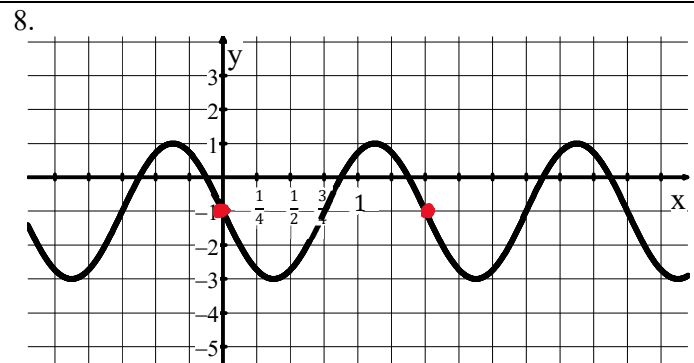
Period = 4



Period = 16



Period = 10



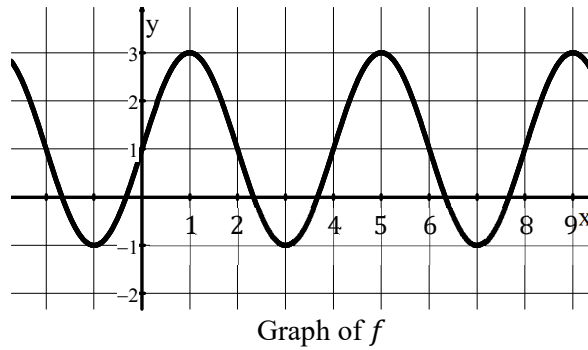
Period = 1.5

3.1 Periodic Phenomena

3.1 Test Prep

9.

B



Period = 4

The graph of the function f is given in the xy -plane. Which of the following functions has the same period as f ?

