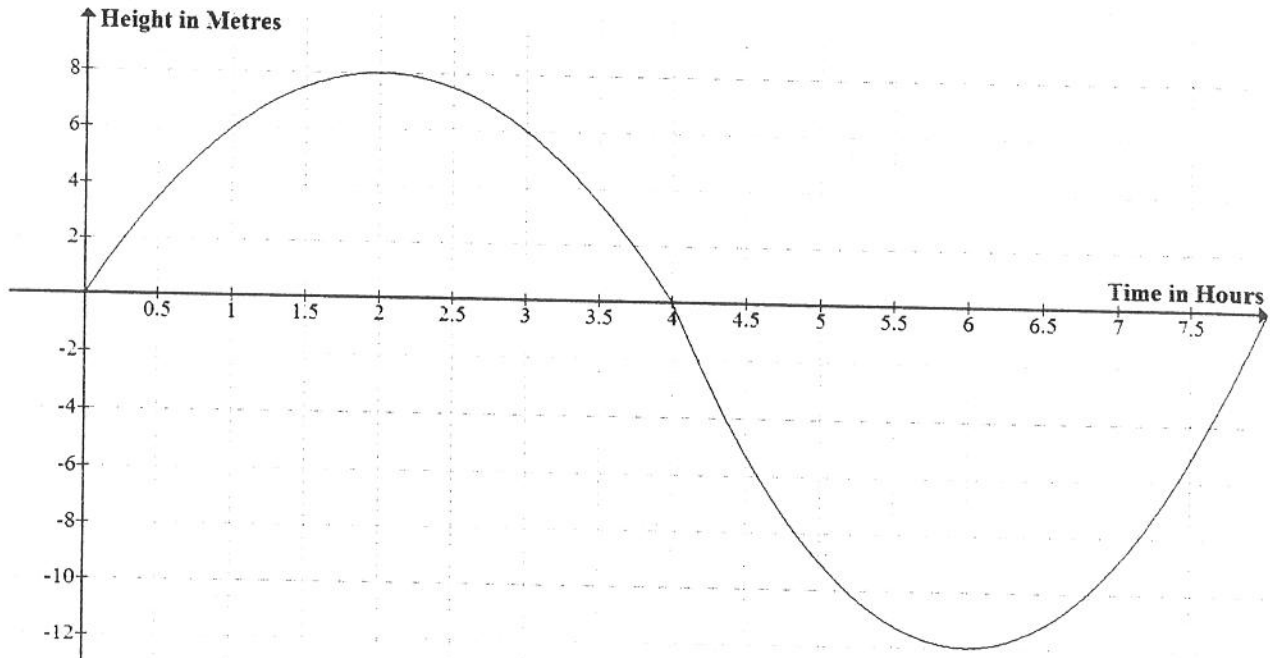


Math 4CST Properties of Functions.

Name: _____

Domain, Range & Extrema

1. The height of a dolphin's dive is modelled by the function below.



How long did the dive last? _____

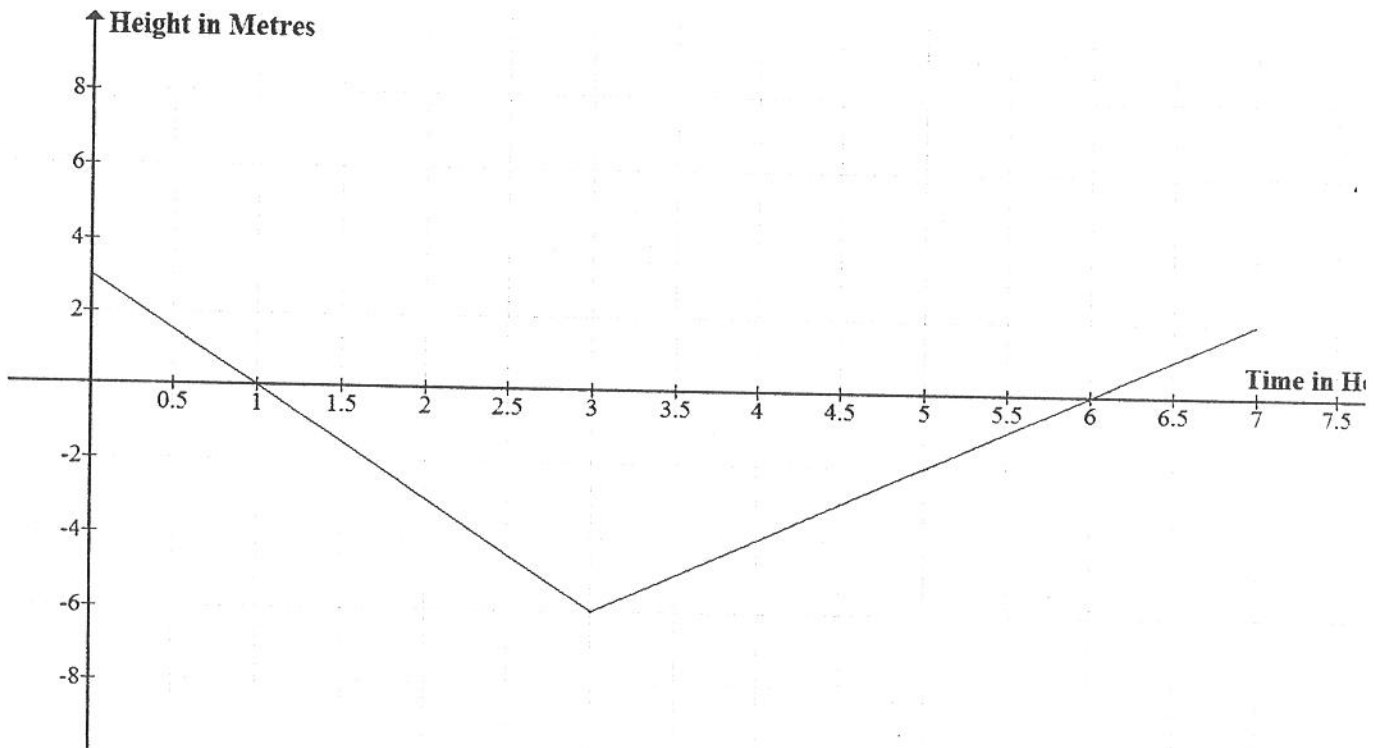
What is the domain of this function? _____

What is the minimum height of the dive? _____

What is the maximum height of the dive? _____

What is the range of this function? _____

3. The height of spelunkers as they explore caves is recorded in the graph below.



What was the initial height of the spelunkers? _____
 (ie: initial value?)

Over what interval(s) was the height of the spelunkers increasing? _____
 (ie: When is this function increasing?)

When did they reach their maximum? _____

Over what interval(s) was the height of the spelunkers decreasing?

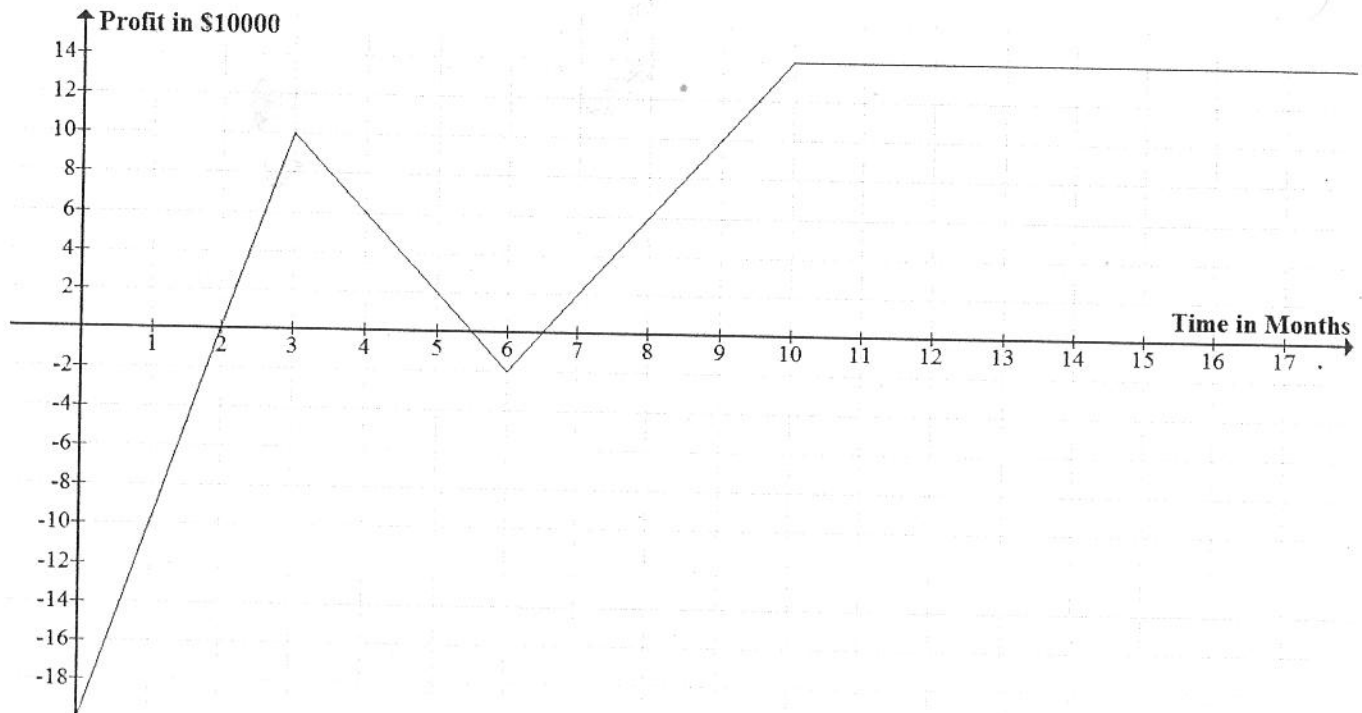
(ie: When is this function decreasing?)

When did they reach their minimum? _____

When was the height of the spelunkers constant? _____

(ie: When is this function constant?)

4. The profit recorded by a new company is shown in the graph below.



What was the company's initial profit? _____
(ie: initial value?)

Over what interval(s) was the company's profit increasing? _____

(ie: When is this function increasing?)

When did it reach its maximum? _____

Over what interval(s) was the company's profit decreasing? _____

(ie: When is this function decreasing?)

When did it reach its minimum? _____

When was the company's profit constant? _____

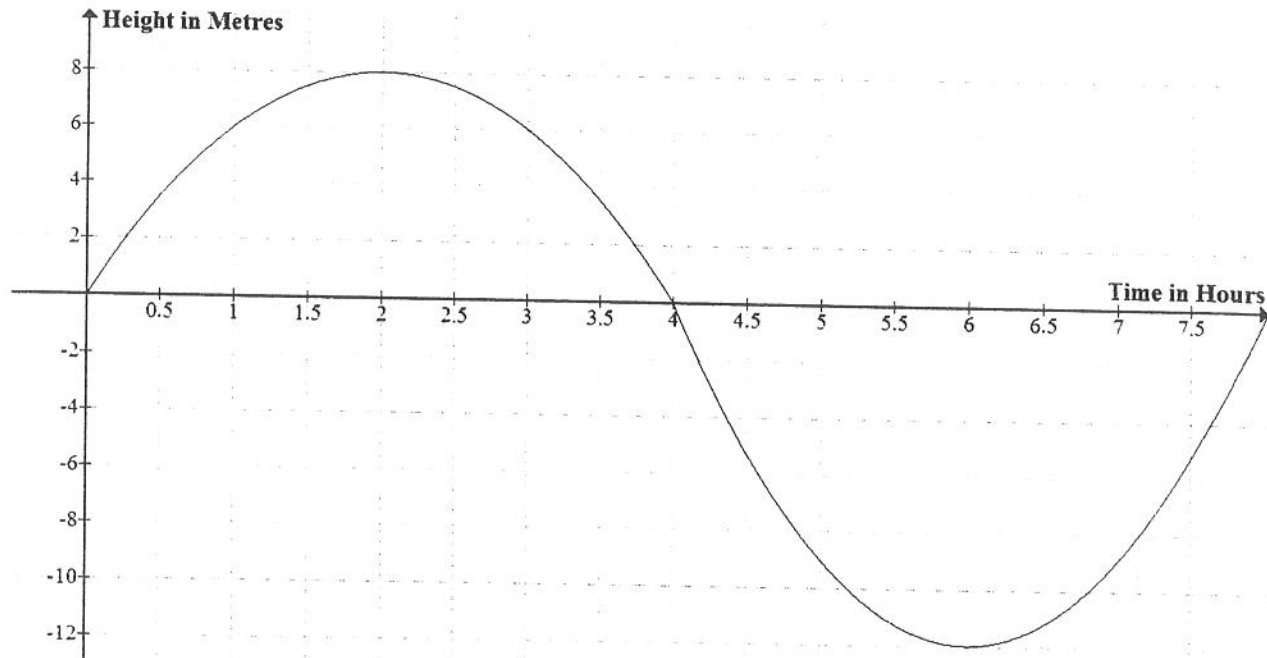
(ie: When is this function constant?)

Math 4CST Properties of Functions.

Name: _____

Signs of a Function (Positive, Negative, Zeros)

1. The height of a dolphin's dive is modelled by the function below.



Over what interval was the dolphin above sea level? _____

Over what interval was the dolphin below sea level? _____

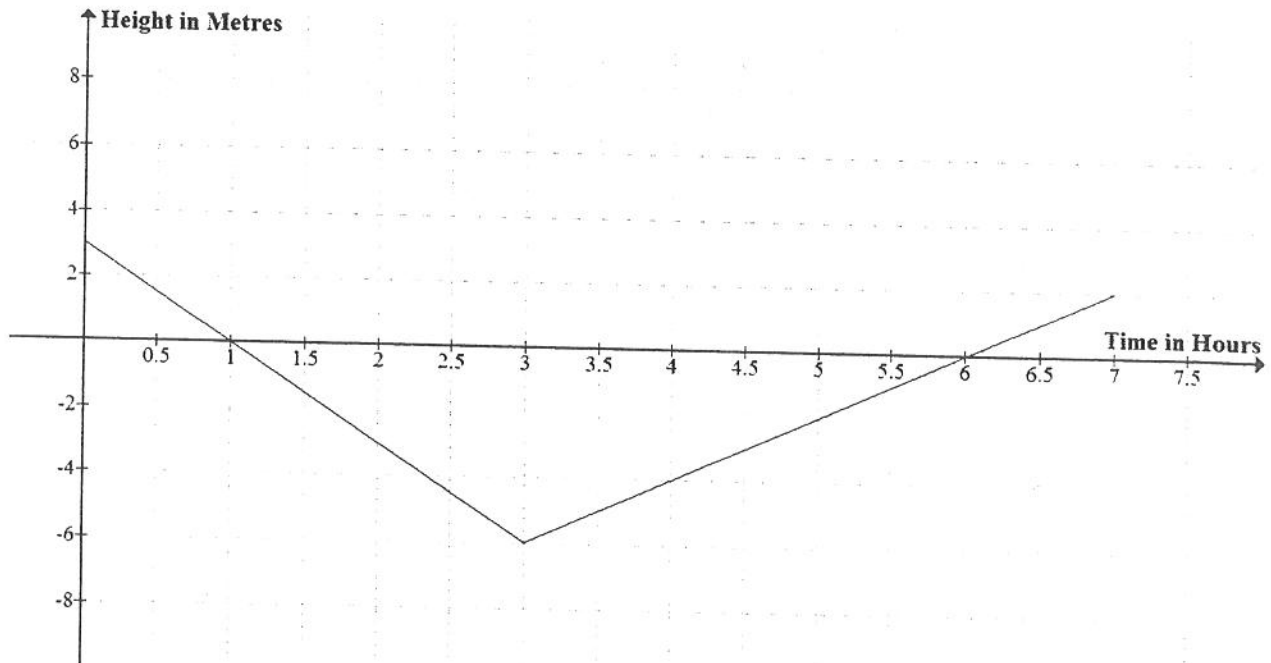
At what time(s) was the dolphin at sea level? _____

When is this function positive? _____

When is this function negative? _____

What are the zeros of this function? _____

3. The height of spelunkers as they explore caves is recorded in the graph below.



Over what interval(s) were the spelunkers above sea level? _____

Over what interval(s) were the spelunkers below sea level? _____

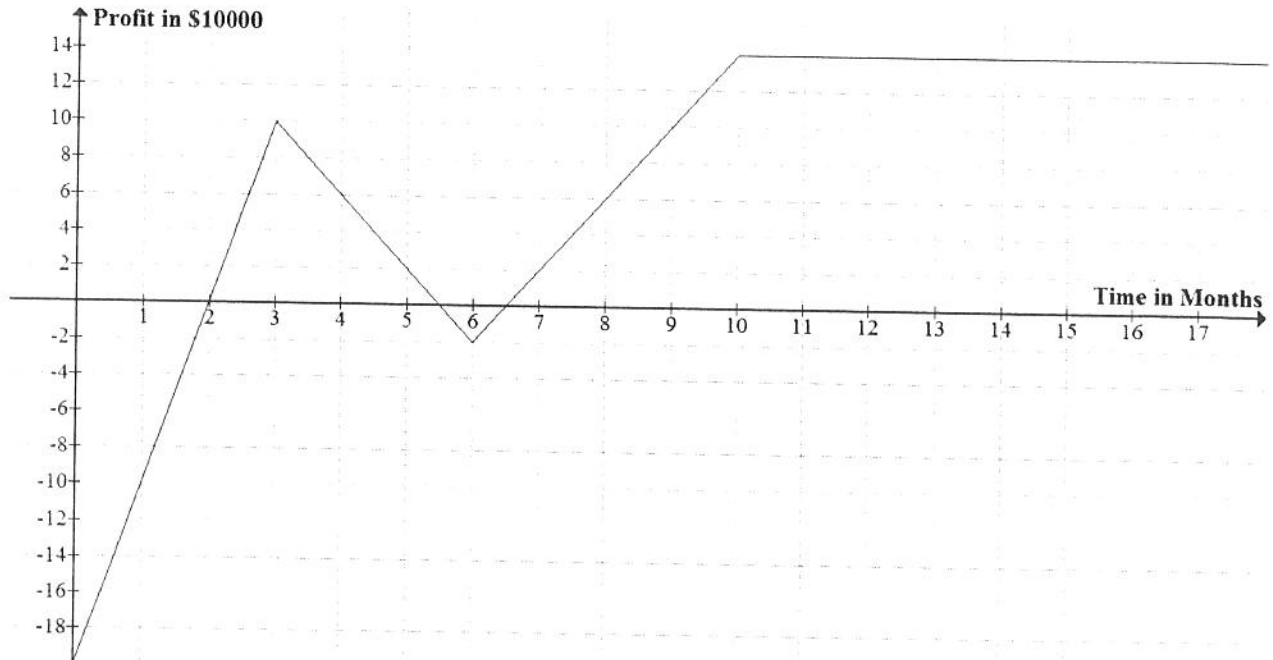
At what time(s) were the spelunkers at sea level? _____

When is this function positive? _____

When is this function negative? _____

What are the zeros of this function? _____

4. The profit recorded by a new company is shown in the graph below.



Over what interval(s) was the company making a profit? _____

Over what interval(s) was the company losing money? _____

At what point(s) did the company break even? _____

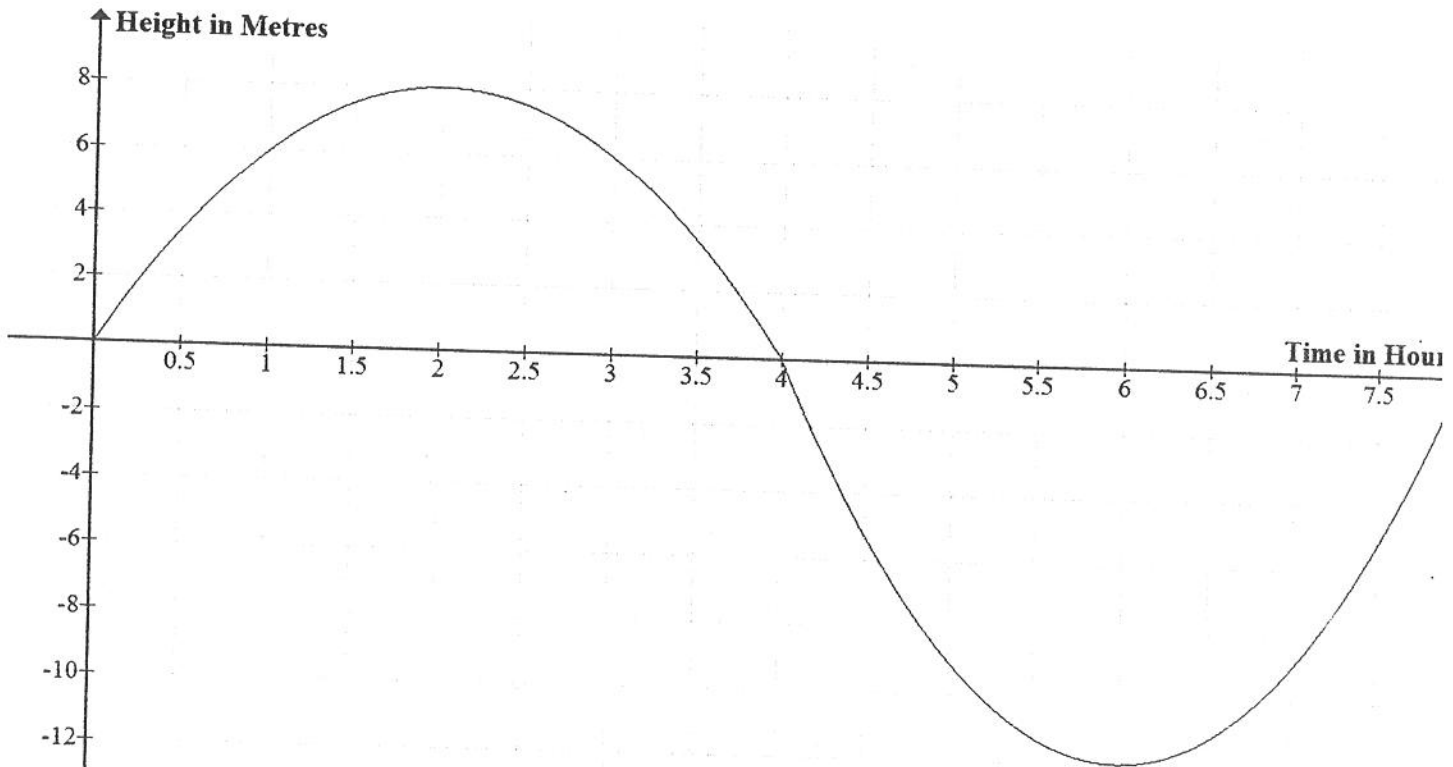
When is this function positive? _____

When is this function negative? _____

What are the zeros of this function? _____

Variation of a Function (Increasing, Decreasing, Constant)

1. The height of a dolphin's dive is modelled by the function below.



What was the initial height of the dive? _____ (ie: initial value?)

Over what interval(s) was the height of the dolphin's dive increasing? _____
(ie: When is this function increasing?)

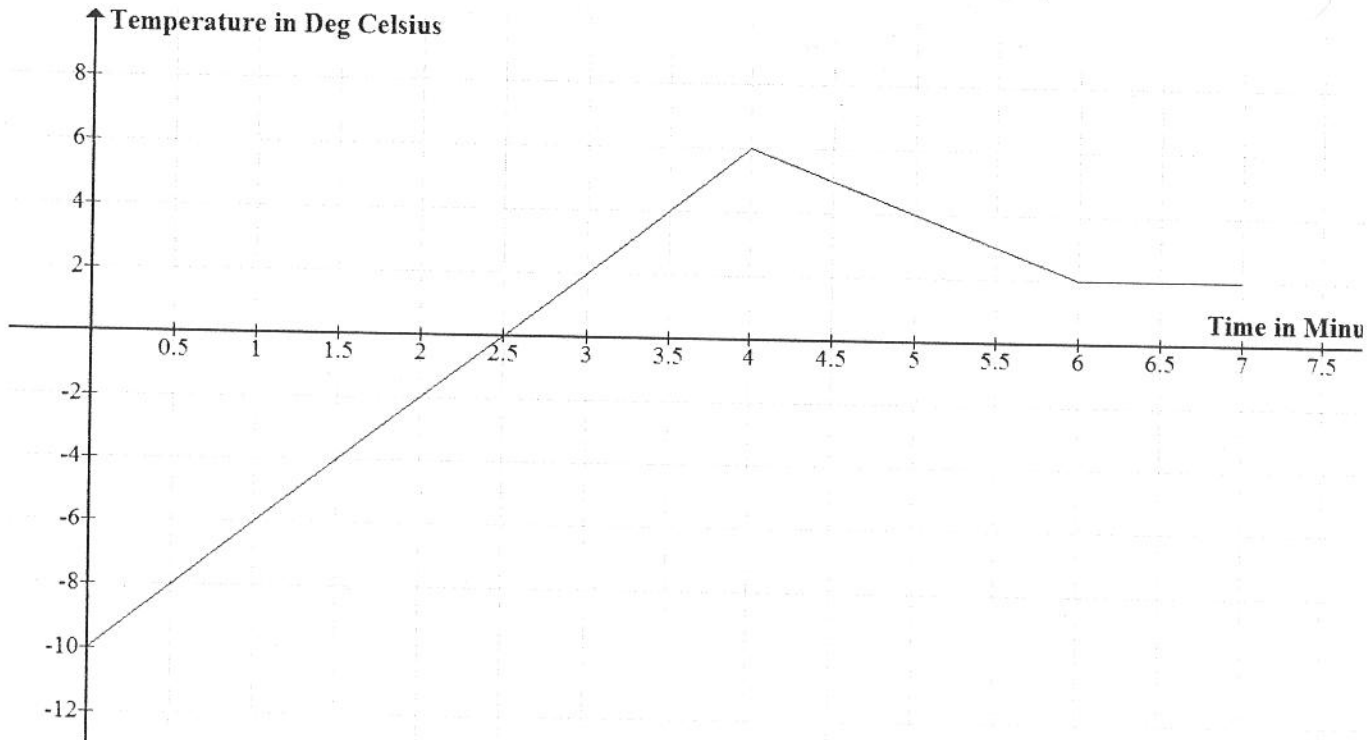
When did it reach its maximum? _____

Over what interval(s) was the height of the dolphin's dive decreasing? _____
(ie: When is this function decreasing?)

When did it reach its minimum? _____

When was the height of the dolphin's dive constant? _____
(ie: When is this function constant?)

2. The temperature of a substance during an experiment is recorded in the graph below.



What was the initial temperature of the substance? _____
(ie: initial value?)

Over what interval(s) was the temperature increasing? _____

(ie: When is this function increasing?)

When did it reach its maximum? _____

Over what interval(s) was the temperature decreasing? _____

(ie: When is this function decreasing?)

When did it reach its minimum? _____

When was the temperature constant? _____

(ie: When is this function constant?)