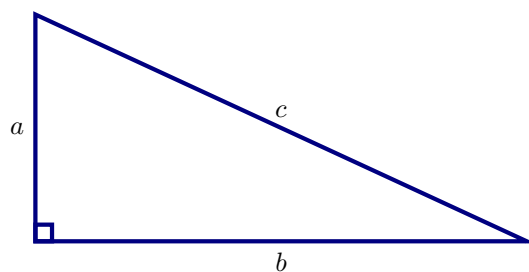


Pythagorean Theorem

This gives an example on how to find the hypotenuse in a right triangle.

To start we can have theorem environments:

Theorem 1. *Given a right triangle:*



We have that:

$$a^2 + b^2 = c^2$$

Exercise 1 $3 \times 2 = \boxed{6}$

Exercise 2 Given that $r(v) = -2v^2 - 4v - 4$, evaluate $r(-0.4)$. Express your answer in decimal notation.

Hint: $r(-0.4) = -2(-0.4)^2 - 4(-0.4) - 4$.

Hint: $r(-0.4) = -2.72$.

The value of the function $r(v) = -2v^2 - 4v - 4$, evaluated at $v = -0.4$, is $\boxed{-2.72}$.

Question 3 What is the worst kind of cat?

Multiple Choice:

(a) tabby

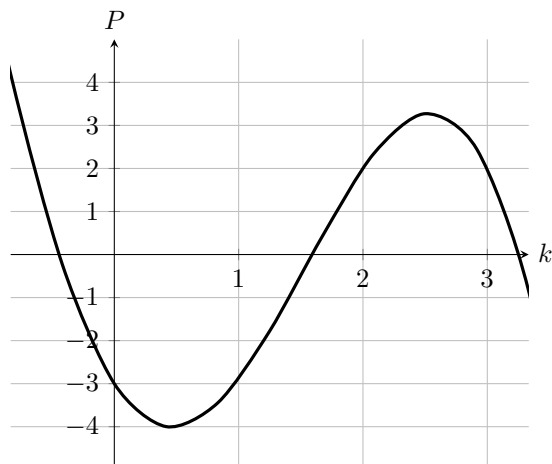
Learning outcomes: Understand a first example of the Ximera style. Have a nice basic example to work from.

- (b) puppy ✓
- (c) dog
- (d) kitten
- (e) main coon

Hint: It is not a cat or a type of cat.

Hint: It is a puppy!

Question 4.1 In the plot below, is P a function of k ?



Solution

- (a) Yes. ✓
- (b) No.

Hint: For each input, how many outputs are there?

Use the plot to compute $P(2)$.

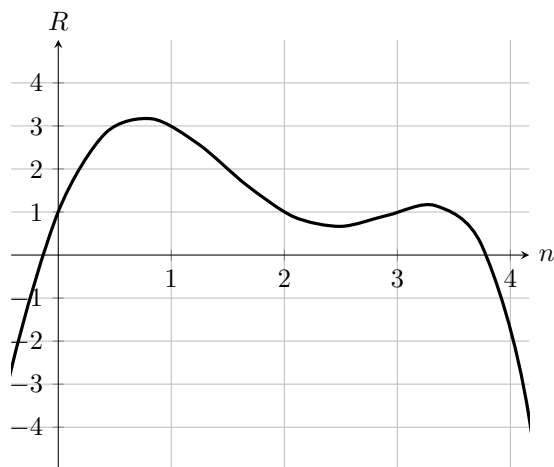
Solution

Hint: To start, find 2 on the horizontal axis.

Hint: Now from this position, move up or down until you reach the curve. The value of $P(2)$ is the height of the curve at the point $k = 2$.

The value of $P(2)$ is .

Question 4.2 In the plot below, is R a function of n ?



Solution

- (a) Yes. ✓
- (b) No.

Hint: For each input, how many outputs are there?

Use the plot to compute $R(3)$.

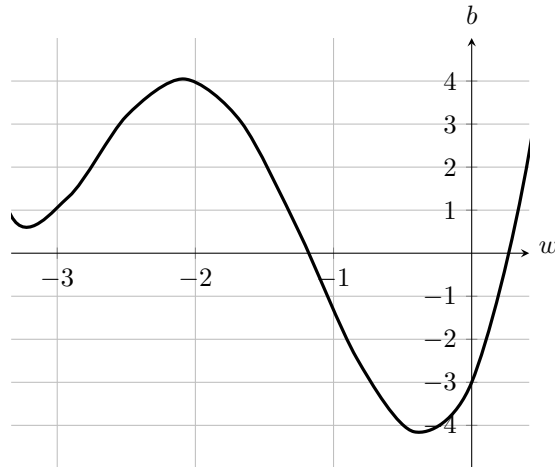
Solution

Hint: To start, find 3 on the horizontal axis.

Hint: Now from this position, move up or down until you reach the curve. The value of $R(3)$ is the height of the curve at the point $n = 3$.

The value of $R(3)$ is .

Question 4.3 In the plot below, is b a function of w ?



Solution

- (a) Yes. ✓
(b) No.

Hint: For each input, how many outputs are there?

Use the plot to compute $b(-2)$.

Solution

Hint: To start, find -2 on the horizontal axis.

Hint: Now from this position, move up or down until you reach the curve. The value of $b(-2)$ is the height of the curve at the point $w = -2$.

The value of $b(-2)$ is .

Question 5 Enter the matrix $\begin{bmatrix} x & y \\ xy & z+1 \end{bmatrix}$

Matrix Answer
correctMatrix = [['x','y'],['xy','z+1']]