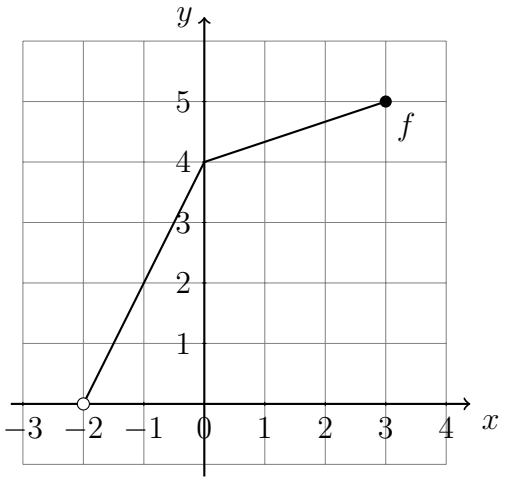
BECA / IB Math 01-Linear functions Name:
17 September 2021

1.4 Homework: Functions

1. The graph of a function f is shown on the grid below.



   (a) Write down $f(-1)$

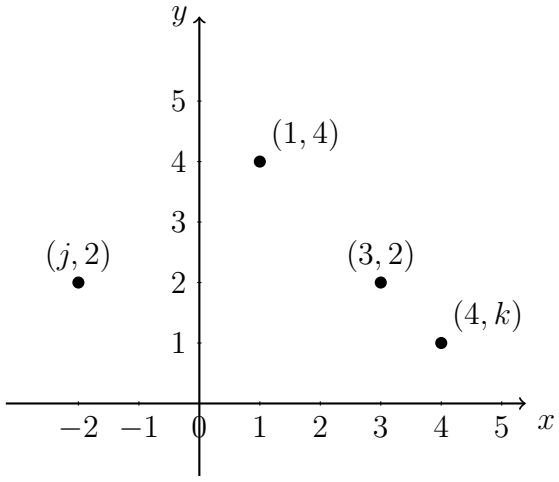
   (b) Find x for $f(x) = 5$.

   (c) Label which is the domain and which is the range.

      i. $(0, 5]$

      ii. $-2 < x \leq 3$

2. A relation composed of four points is plotted on the graph below, and represented as a set of ordered pairs as $\{(j, 2), (1, 4), (3, 2), (4, k)\}$



   (a) Write down j

   (b) Write down k

   (c) Is the relation a function? Why or why not.

   (d) Add an ordered pair to the relation so that it would *not* be a function.

3. An athlete finds that the number of reps she can lift is a function of the weight.

Weight (lbs)	10	15	20	25	30
Reps	18	12	3	0	0

   (a) How many times can she lift 20 pounds?

   (b) What is the domain of the function shown in the table?

   (c) Estimate the maximum weight she can lift.

4. In the following two problems, solve for the value of x.

   (a) $2x - 3 = 12 - x$

   (b) $(3x - 2) + (x - 6) = 0$

5. Given the linear function $f(x) = 5x - 7$.

   (a) Find $f(-1)$

   (b) $f(x) = 8$. Find x.

6. Two functions f and g are shown on the grid below.

   (a) What is the equation of f?

   (b) What is the equation of g?

   (c) What is the intersection of the lines as an ordered pair.