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

1.7 Do Now Quiz: Functions

1. More on the pyramid workout routine: Let x be the set number with the number of repetitions ("reps") a function of x.

Sample Bench Press Pyramid (Bill Geiger)
Set 1: 135 lbs, 14 reps
Set 2: 185 lbs, 12 reps
Set 3: 205 lbs, 10 reps
Set 4: 225 lbs, 8 reps
Set 5: 245 lbs, 6 reps
Set 6: 265 lbs, 4 reps

   (a) How many reps are planned for the second set, when $x = 2$?

   (b) Which set has the fewest reps?
   (express your answer in the form $x =$ a number)

   (c) Explain what the ordered pair $(4, 8)$ would refer to in this context.

   (d) Do the reps increase by a constant amount with each set? Explain.
   (If so, what is the slope, or rate of change?)

2. Consider the function $f(x) = 50 - 10x$.

   (a) Write down the independent variable.

   (b) Calculate $f(1)$

   (c) Show that $f(3.5) = 15$

   (d) There is an x for which $f(x) = -80$.
   Find this value of x.

Early finishers

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

   (a) $\frac{1}{2}x - 5 = 3\frac{1}{2}$

   (b) $4x - \frac{3}{4} = 3 + \frac{1}{4}x$

4. Given the linear function $f(x) = -\frac{2}{3}x + 4$.

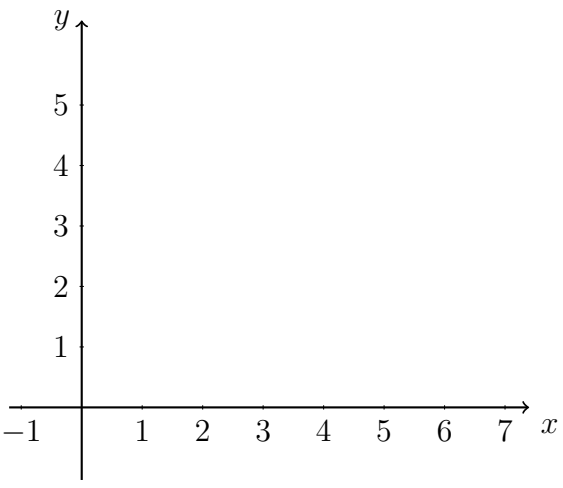
   (a) Find $f(0)$

   (b) $f(x) = 0$. Find x.

   (c) Plot the answers to the first two parts, (a) and (b), as points on the grid and label them as ordered pairs.

   (d) Draw a straight line through the points to represent the function.

   (e) Which answer, (a) or (b), is the x-intercept. Which is the y-intercept?



5. Simplify each expression. (Leave it in radical form if necessary, not a decimal.)

   (a) $\sqrt{81}$

   (b) $\sqrt{27}$