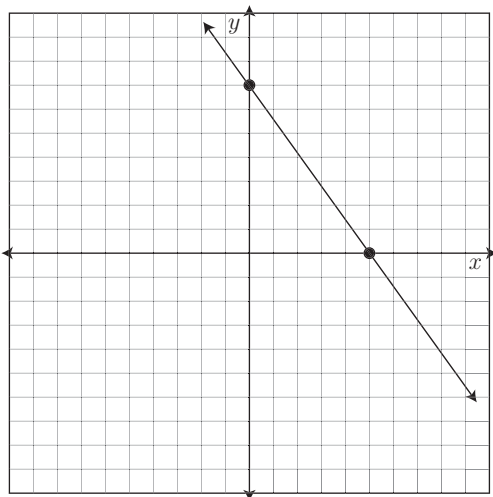


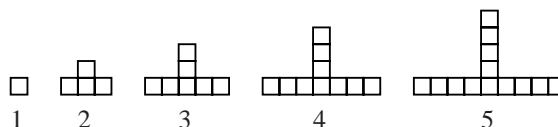
Show all relevant work!

1. Write the equation of the line graphed below.



2. If 20 pounds of potatoes costs \$3.20, how much will 35 pounds cost?

3. How many square tiles will it take to make the 3709th figure in the sequence shown to the right?



4. A tub drains so that after 5 minutes 30 gallons of water remain in the tub and after 20 minutes, 21 gallons remain.

(a) If the amount of water in the tub is linearly dependent on the time since the drain was opened, write the equation of the volume of water in the tub, V , as a function of time, t .

(b) What does the slope of this line tell you?

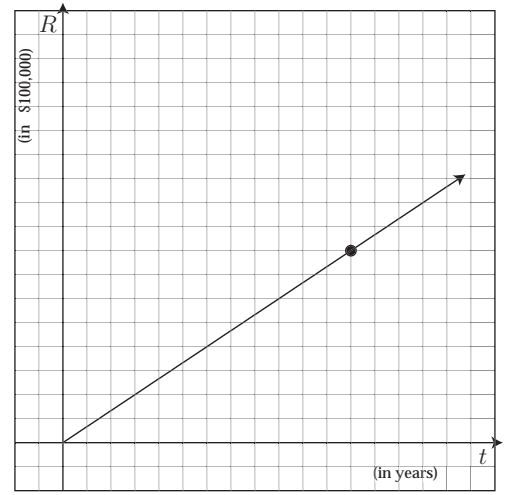
(c) How much water is there in the tub when it begins draining?

(d) Find the t -intercept and interpret its meaning in this context.

5. The revenue for a company (in hundred thousands of dollars) is plotted versus time (in years).

(a) Explain the meaning of the given point in this context.

(b) Find the slope of the line and interpret its meaning in this context.

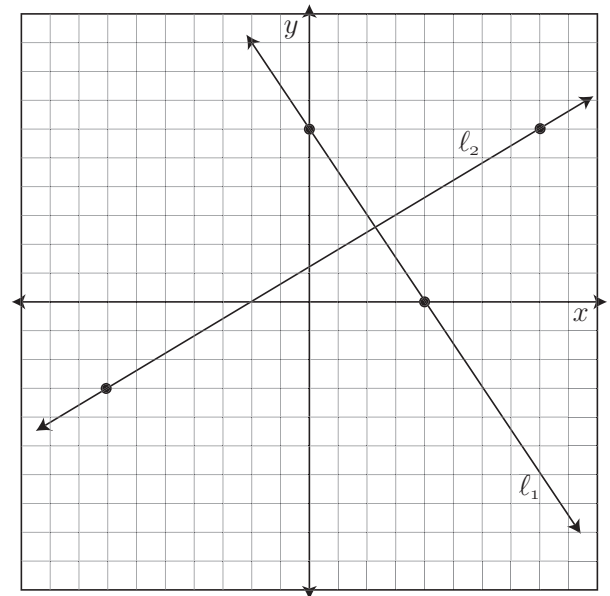


(c) Find the equation of this line and use it to predict the revenue for this company after 30 years in business.

6. Use the graph to the right to answer the following questions. (Only the marked points are exact – don't assume the lines go through any other grid points on the graph.)

(a) Write the equation of line ℓ_1 .

(b) Write the equation of line ℓ_2 .



(c) Are ℓ_1 and ℓ_2 perpendicular? Explain.

(d) Determine the point of intersection of ℓ_1 and ℓ_2 .