

- 1 Julie started a pet-care business. She bought the necessary supplies for \$85. Julie charges \$25 per weekend for each pet she cares for. Which function represents her net profit in terms of x , for the number of pets she cares for?

$$y = 25x - 85$$

Explain the meaning of -85 She is behind 85 dollars to start due to the cost of supplies.

Explain the meaning of 25 revenue from caring for a pet

Explain the meaning of $25x$ total revenue from caring for pets.

What vocabulary word defines "-85" constant

What vocabulary word defines "25" coefficient

How much money would Julie make if she cared for 12 pets? (show your work)

$$y = 25(12) - 85$$

$$y = 300 - 85 = \boxed{215 \text{ dollars}}$$

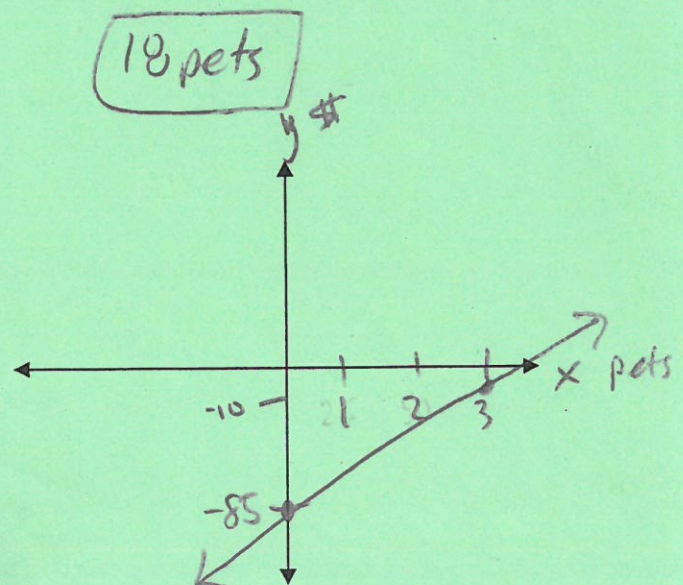
How many pets would Julie have to care for to make 350 dollars? (show your work)

$$350 = 25x - 85$$

$$\frac{435}{25} = \frac{25x}{25}$$

$$x = 17.4$$

Make a sketch of the equation on the axis to the right.



- 2 Bradley the crocodile weighs 23 kilograms. His veterinarian wants him to be on a diet to lose 1.5 kg each month. Which equation represents Bradley's weight after x months?

$$y = -1.5x + 23$$

Explain the meaning of 23 his current weight.

Explain the meaning of -1.5 lose 1.5 kg each month

Explain the meaning of $-1.5x$ total weight lost

What vocabulary word defines "23" constant

What vocabulary word defines " $-1.5x$ " term

How many kg will Bradley weigh after 3 months? (show your work)

$$y = -1.5(3) + 23$$

$$y = -4.5 + 23 = \boxed{18.5 \text{ kg}}$$

How many months will it take for Bradley to weigh 15 kg? (show your work)

$$15 = -1.5x + 23$$

$$-8 = -1.5x$$

$$x = 5\frac{1}{3}$$

$$\boxed{5\frac{1}{3} \text{ months}}$$

Make a sketch of the equation on the axis to the right.

