

3.6.6 Practicing Models

Part A: Complete the following table

#	Context	Equation in: $y = mx + b$	Problem
1	A caterer charges a flat fee of \$400 plus \$15/person.		Find the cost after 30 people
2	An internet package charges a flat fee of \$10 plus \$0.40 per hour.		Find the number of hours of internet usage if the cost is \$200.
3	The temperature of hot water placed in the freezer is 80°C and it is decreasing at the rate of 8°C per hour.		Find the temperature after 13 hours.
4	A tree's diameter grows by $1\frac{1}{4}$ cm per year. The tree's diameter is currently 12 cm.		Find how many years it will take have diameter $20\frac{3}{4}$ cm.
5	A spring is 14 cm long with no mass on it and it grows by 3 cm per kg put on it.		Find how much weight was added if the spring is 35 cm long.

Part B: For each equation, create a real world context. Identify the independent variable (x) and dependent variable (y) for each.

- $y = 15x$

- $y = 0.05x + 25$

- $y = 20x - 100$
