

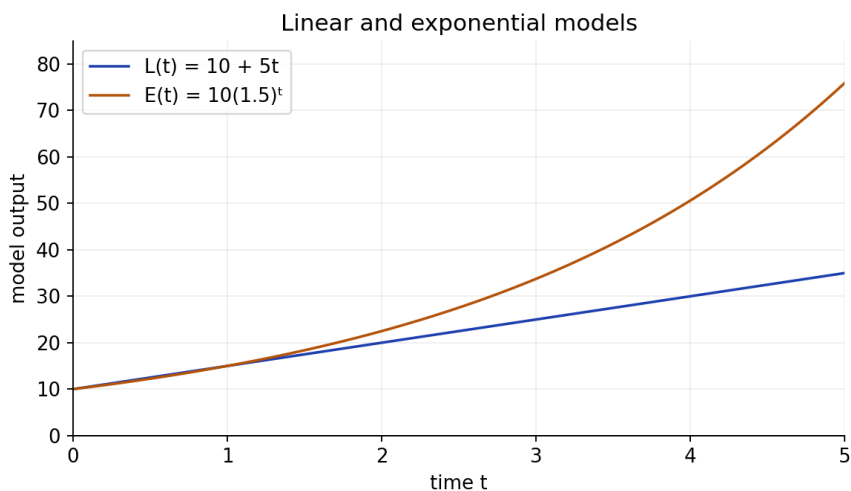
Problems | Name: _____

6.1 Choosing a Model

6.1.1. Data at $x=0, 1, 2, 3$ are 1, 4, 9, 16. Identify a simple model.

6.1.2. Data at $t=0, 1, 2$ are 100, 80, 64. Identify the factor and a model.

6.1.3. The graph compares $L(t) = 10 + 5t$ and $E(t) = 10(1.5)^t$. Which has constant additive change and which has constant multiplicative change?



Compare equal additive and equal multiplicative change.

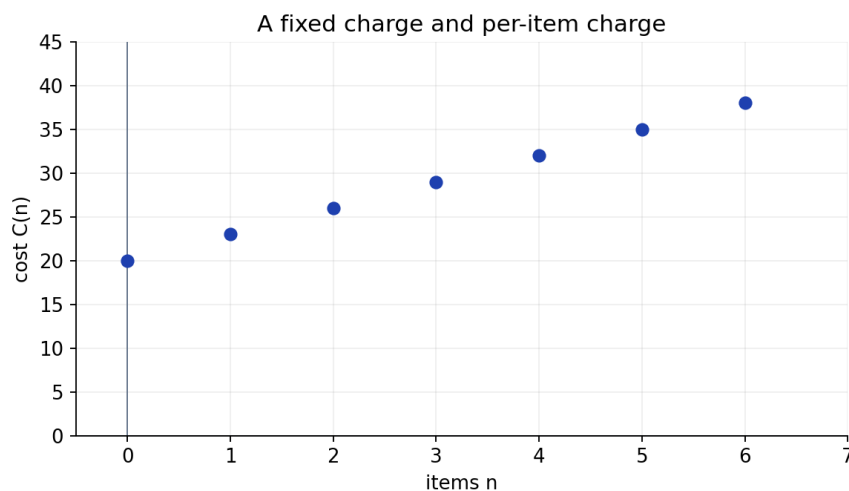
Problems | Name: _____

6.2 Interpreting Parameters

6.2.1. A taxi model is $C(d) = 6 + 2.5d$ dollars for d kilometers. Interpret both parameters.

6.2.2. Interpret the vertex of $h(t) = -(t - 3)^2 + 16$, measured in meters and seconds over a suitable physical interval.

6.2.3. From the graph of $C(n) = 20 + 3n$, identify the fixed charge and charge per item, assuming nonnegative integer n .



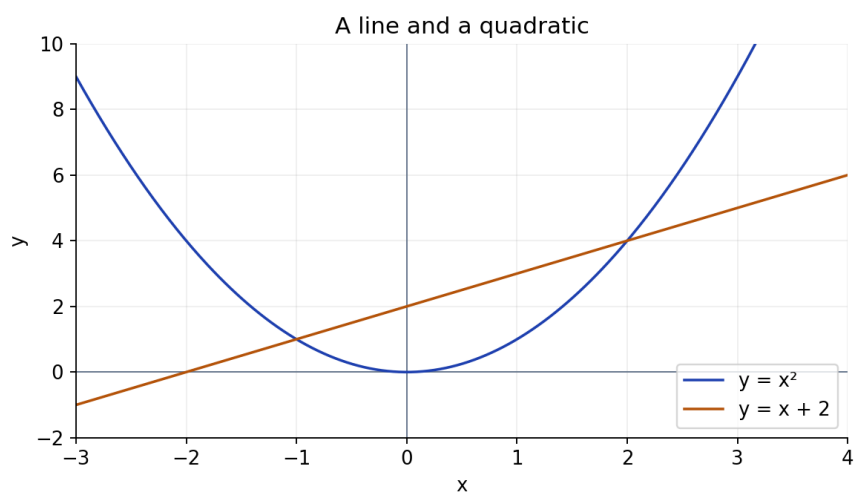
Only integer item counts belong to this cost model.

Problems | Name: _____

6.3 Solving Graphically and Algebraically

6.3.1. Solve $x^2 = 9 - x^2$.

6.3.2. Solve $\sqrt{x+2} = x$ and state why both squared-equation roots are not valid.

6.3.3. Use the graphs of $y = x^2$ and $y = x + 2$ to find their intersections, then verify algebraically.

Each common point solves both equations.
