Practice worksheet | Functions and straight-line graphs

Dependent and independent variables

Name: _____ Date: _____

6 questions | 12 marks

1. A tank starts with 200 L and drains at 8 L/min: $V = 200 - 8t$. Name the independent and dependent variables and their units. [2 marks]

2. For the tank model $V = 200 - 8t$, find the volume at 15 minutes. [2 marks]

3. A postage model uses $P = 2 + 0.5m$ for mass m in grams. Interpret 0.5 with units. [2 marks]

4. For $R = 18n$ ticket revenue, give the first four permitted inputs if no ticket has yet been sold. [2 marks]

5. A phone battery model is $B = 100 - 5t$ for $0 \le t \le 20$, with t in hours. Explain why $t = 30$ is not allowed. [2 marks]

6. A table records shoe size and height for 30 people. Does calling height an output prove that shoe size causes height? [2 marks]