Practice worksheet | Linear and exponential models

Piecewise practical models where relevant

Name: _____ Date: _____

6 questions | 13 marks

1. A fee is 8 dollars for $0 < t \le 2$ h, then $8 + 4(t - 2)$ for $t > 2$. Find the fee at 5 h. [2 marks]

2. A fee is 8 dollars for $0 < t \le 2$ h, then $8 + 4(t - 2)$ for $t > 2$. Find the charge at exactly 2 h. [2 marks]

3. Water costs 2 dollars/kL for the first 10 kL and 3 dollars/kL above 10. Write its rule for $u > 10$. [2 marks]

4. Water costs 2 dollars/kL for the first 10 kL, then 3 dollars/kL above 10. Find the bill for 14 kL. [2 marks]

5. A parcel fee is 5 dollars for $0 < m \le 1$ kg and 9 dollars for $1 < m \le 2$ kg. Find fees at 1 kg and 1.1 kg. [2 marks]

6. A proposed rule gives $C = 4t$ for $0 \le t \le 2$ and $C = 3t + 1$ for $t \ge 2$. What is wrong? [3 marks]