Practice worksheet | Linear models and optimisation

Forming linear equations from situations

Name: _____ Date: _____

6 questions | 12 marks

1. A printer charges AUD 12 setup and AUD 0.08 per page. Write C for p pages. [2 marks]

2. A 24 cm candle burns down at 1.5 cm per hour. Write its height and useful time domain. [2 marks]

3. Temperature rises from 8 degrees Celsius at 6 am to 20 degrees at noon at a constant rate. Let t be hours after 6 am. Find $T(t)$. [2 marks]

4. An account starts with AUD 250 and receives AUD 40 each week, with no interest. Find its balance after 9 weeks. [2 marks]

5. A linear cost is AUD 46 for 3 units and AUD 70 for 7 units. Find its rule. [2 marks]

6. Interpret $M = 180 - 4t$, where mass is in grams and time in minutes. When does it become physically impossible? [2 marks]