Practice worksheet | Ratios and rates

Modelling practical rate problems and checking assumptions

Name: _____ Date: _____

6 questions | 17 marks

1. A printer produces 18 pages/min. Predict its output in 7 min and state one assumption. [2 marks]

2. Five volunteers pack 120 boxes in 2 h. At the same rate per volunteer, how many boxes can 8 volunteers pack in 3 h? [3 marks]

3. One litre of paint covers 8 square metres. A wall is 38 square metres. Paint is sold in whole 1 L tins. How many tins are needed? [3 marks]

4. A walker averages 4.8 km/h while moving. Predict the time for 3 km. State why the whole journey might take longer. [3 marks]

5. A service costs AUD 30 plus AUD 50 per hour. Is the total cost directly proportional to hours? Find the cost of 3 h. [3 marks]

6. A tap supplies 4 L after 1 min, 8 L after 2 min and 11 L after 3 min. Does one exact constant-rate model fit all the data? Explain. [3 marks]