Practice worksheet | Linear equations and inequalities

Practical simultaneous/inequality models and checks

Name: _____ Date: _____

6 questions | 20 marks

1. One smoothie and two juices cost 14 dollars. Two smoothies and two juices cost 20 dollars. Find both prices. [3 marks]

2. A car park has 18 vehicles, all cars or motorbikes. There are 58 wheels. Find each number. [3 marks]

3. A hire fee is 25 dollars plus 6 dollars per hour. Write the cost condition for a budget of at most 70 dollars, then find the greatest whole number of hours. [3 marks]

4. A recipe uses 3 units of flour and 2 units of sugar per batch A, or 1 unit of flour and 3 units of sugar per batch B. Exact totals of 17 flour units and 16 sugar units are used. Find the batch counts. [4 marks]

5. A model gives 7.5 buses for transporting a group. Explain why this is not a directly usable bus count and what extra information is needed. [3 marks]

6. A council must buy at least 12 benches and tables in total. Benches cost 80 dollars and tables cost 120 dollars; the budget is 1200 dollars. Define variables, write constraints and test 9 benches with 3 tables. [4 marks]