Practice worksheet | Exponentials and logarithms

Solving exponential equations with base-10 logs

Name: _____ Date: _____

6 questions | 14 marks

1. Solve $8^x = 12$ to four decimal places. [2 marks]

2. Solve $2^{x+3} = 7$ to four decimal places. [2 marks]

3. Solve $4(1.2)^t = 10$ to three decimal places. [2 marks]

4. A 600-unit quantity grows by 8% at the end of each year. In which completed year does it first exceed 1000? [3 marks]

5. Solve $(0.8)^t < 0.3$ for real t. [3 marks]

6. Can $2^x = -3$ have a real solution? Explain. [2 marks]