Practice worksheet | Trigonometry

Triangle and periodic-model applications

Name: _____ Date: _____

6 questions | 18 marks

1. For tide $d = 4 + 2\cos(\frac{\pi t}{6})$, t in hours, state range, period and starting depth. [3 marks]

2. For $d = 4 + 2\cos(\frac{\pi t}{6})$, find $d = 4$ on $0 \le t < 12$. [3 marks]

3. Paths 8 km and 11 km leave a camp 60° apart. Find endpoint separation exactly. [3 marks]

4. A triangle has $a = 20$ m opposite $A = 40^\circ$, and $B = 70^\circ$. Find b to one decimal place. [3 marks]

5. A wheel has centre height 12 m, radius 10 m and period 40 s. It starts at its lowest point. Give a model. [3 marks]

6. Why might today's fitted sine temperature model fail to predict next month's temperatures? [3 marks]