Solution Sheet 15, September 3, 2012

Answers

1. 18
2. $\sqrt{2}$
3. Hint: find 8 right angled triangles.
4.
5. (a) $\frac{1}{6}+\frac{1}{6}+\frac{1}{7}, \frac{1}{6}+\frac{1}{5}+\frac{1}{15}, \frac{1}{6}+\frac{1}{4}+\frac{1}{13}, \frac{1}{5}+\frac{1}{5}+\frac{1}{11}, \frac{1}{5}+\frac{1}{4}+\frac{1}{21}$
   (b) Similar to the above. Start with $a=b=c=4$ and find the smallest value of d such that $\frac{1}{a}+\frac{1}{b}+\frac{1}{c}+\frac{1}{d}<1$