

Solution Sheet 15, September 3, 2012

## Answers

- 18
- $\sqrt{2}$
- Hint: find 8 right angled triangles.
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- (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  $\frac{1}{a} + \frac{1}{b} + \frac{1}{c} + \frac{1}{d} < 1$