

**MATHEMATICS ENRICHMENT CLUB.<sup>1</sup>**  
**Solution Sheet 1, April 30, 2012**

## Answers

1. Easy
2.  $1/4$  and  $1/64$  full.
3. 4.
4. easy
- 5.iii)  $n = p^4q^2$ ,  $p, q$  distinct primes will do.
- 6.
- 7.
8. 39,690km, which is less than 2% different from the actual circumference of the earth.

---

<sup>1</sup>Some of the problems here come from T. Gagen, Uni. of Syd. and from E. Szekeres, Macquarie Uni.

## Senior Questions.

1.