

Mathematics 226H – Geometry I: Euclidean geometry
TRENT UNIVERSITY, Winter 2008

Problem Set #10

Due on Friday, 28 March, 2008.

1. Exercise 4A.2 [5]
2. Exercise 4A.5 [5]

Note: In solving both exercises, you may assume, if you find it useful to do so, that earlier exercises in the text are true.

Suitable formulas?

$$e^{i\heartsuit} = \cos(\heartsuit) + i \sin(\heartsuit)$$

$$\frac{1}{1-\diamondsuit} = 1 + \diamondsuit + \diamondsuit^2 + \diamondsuit^3 + \dots = \sum_{n=0}^{\infty} \diamondsuit^n$$

$$\int_{\circlearrowleft} \partial\clubsuit = \int_{\partial\circlearrowleft} \clubsuit$$

$$(x+y)^{\spadesuit} = x^{\spadesuit} + \spadesuit x^{\spadesuit-1}y + \frac{\spadesuit(\spadesuit-1)}{2} x^{\spadesuit-2}y^2 + \dots = \sum_{k=0}^{\infty} \binom{\spadesuit}{k} x^{\spadesuit-k} y^k$$

Inspired by an xkcd comic, which you can find at: xkcd.com/55/