Problem Set Week Three and Four Solution

- 1. 10.05
- 2. y = -2x + 2
- 3. y = 3x 5
- 4. Perpendicular
- 5. Y = -3/4x
- 6. y = 3x 4
- 7. y=x-4 or/and y=-x
- 8. When x=0,y=-8, When y=0,x=2
- 9. M=(1,5)
- 10. R is (6,-3)
- 11. The point of intersection is (2, 1)
- 12. I) -0.5 ii) root20 iii) (4,4) iv) 2
- 13. I) Show the gradient of RP, gradient of RQ and then the product of gradients and then the sides RP and RQ are at right angles
 - Ii) use Pythagoras' theorem
- 14. Ii) -1
- 15. y = 4x 13
- 16. i) The graph passes through the points (0, 9) and (140, 23).
 - *ii)* y = 0.1x + 9.
 - iii) The diameter is 15 mm at a point 60 cm from the tip.

17. 2root2

- 18.
- i) -1
- ii) show the proof
- iii) y=-x+4
- 19. root 5
- 20. 22.6274
- 21. 4.47 units
- 22. $(3/4, \frac{1}{2})$
- 23. B = (6,7)
- 24. gradient= -4 and y intercept $(0, \frac{1}{2})$
- 25. y=4x+5
- 26. y=3x-2
- 27. 2y=-x