Some suggested answers to the Sample SMMT Questions

1(a) 5, 17

1(b) 9, 121

1(c) $\sqrt{2}$, π

2. 10 30 hrs
(Hint: The LCM of 10, 15 and 25 is 150)

3. No solutions
(Hint: Observe that the LHS is a positive number while RHS is negative. A number cannot be positive and negative at the same time!)

4. Solve $m^2 - 5m + 7 = 1$, and obtain $m = 2$ or 3.

5(a) $\frac{5}{3}$ cm^2

5(b) $\frac{1}{3}$cm^2

(Hint: For question 5, apply the fact that for two given triangles with the same height, the ratio of their area equals the ratio of their bases)

6(a)(i) 55

(ii) 68 – 40 = 28

(iii) 600 – 200 = 400

6(b) 45

6(c) Paper 2 is more difficult.

7. This is a standard problem involving maxima and minima (application of differential calculus). Answer will not be provided for this problem.