**Mathematical Methods Tutorial Sheet 2 Functions**

**Q1.** Given f(x) = 3e2x and g(x) = 2x + 1, find the value of

* 1. f(2)
  2. f(1.5)
  3. g(f(1))
  4. f(g(0.2))
  5. g(f(x))
  6. g -1(11)

**Q2. (i)** On the same axes, plot the graphs of

y = 4e0.5x

y = 2x +8

for value of x from x = -5 to x = 4, using intervals of one.

**(ii)** Use your graph to solve the simultaneous equations

y = 4e0.5x

y = 2x +8

**Q3.** Evaluate using your calculator, (angles in degrees and minutes to the nearest minute)

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| **Question** | **Solution** | **Question** | **Solution** |
| cos 35.77° | 0.8114 | 4sin 57° 45' | 3.3829 |
| tan 135.6° | -0.9793 | cos-1(0.6564) | 48°58' |
| sin 25° 36' | 0.4321 | tan-1(2.5) | 68°12' |
| cos 12° 52' | 0.9749 | sin-1(0.8254) | 55°38' |