**Skema Markah Mock Test 2**

**Matematik Tambahan Kertas 2**

**Bahagian A**

**1**  [1]

  [1]

 

 

  [1]

  ,  [1]

 ,  [1]

  [1]

**2** (a)  [1]

 *r* = 2 cm [1]

 (b) [1]

 [1]

 [1]

**3** (a) [1]

 [1]

 (b) (i) *RQ = RP* [1]

 [1]

 [1]

 (ii) Show by solving simultaneous equations

 [1]

 *x*= 0 ( only one point of intersection) [1]

 Therefore the line is a tangent.

**4** (a) cos 4*x* = cos [2(2*x*)] = cos2 2*x* − sin2 2*x* [1]

 = cos22*x* ( 1 − ) [1]

 = cos22*x* ( 1 − tan2 2*x*) [1]

 (b)

*y*



*x*

*y = k*

* Cosine Shape with correct amplitude = 1 [1]
* 2 cyles within the domain [1]
* Draw line y = −1 [1]
* k = −1 [1]

**5** (a) [1]

 [1]

 [1]

 (b) [1]

 [1]

 [1]

 [1]

**6** (a) [1][1]

 [1]

 (b)  [1] [1]

 = 173.79 [1]

 (c) (i) median = 41.5 g [1]

 (ii) 173.79 [1]

**Bahagian B**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *x* | 10 | 20 | 25 | 40 | 50 | 60 | 70 |
|  | 1.30 | 2.55 |  | 5.00 | 6.25 | 7.30 | 8.60 |

**7**  (a)

 [1] \*Ignore

*c =0.1*

*m=0.1214*

*x*

*O*

 (b)

At least 1 point correctly plotted . [1]

All points correctly plotted. [1]

Best fit line [1]

\* Ignore (25, )

 (c) (i) [1]

 *k* = 77.5 [1]

 (ii) [1]

 *a* =10 [1]

 (iii) [1]

 *b* = 1.214 [1]

**8** (a) (i)

 [1]

 0 =

 c = 8

 [1]

 (ii) 3 = 2(*h*) +1

 *h* = 1 [1]

 (iii) Area = [1]

 = [1]

 =

 = [1]

 (b) [1]

 [1][1]

  *k* = 2 [1]

**9** (a) (i) – *u* + 4 *v* [1]

 (ii) *v* +3*u* [1]

 (– 2*v* + 3 *u*) or *u* *v* [1]

 (iii) 2 *u* + ( –3*u* + 2*v*) or – *u* + 2*v* + *u* *v* [1]

 *u* + *v* [1]

(b) = *u* + *v* [1]

 = *u* + *v*

 *= 2* *u* + *v* )

 = ( *u* + *v* )

 [1]

 RT : TQ = 2 : 3 [1]

(c) 🡺

 Area of PQT = [1]

 = 20 [1]

**10** (a) (i)

 [1]

 = atau 0.5391 [1]

 (ii) [1]

 [1]

 (b) (i)

 = [1]

 =

 = 0.4404 [1]

 (ii)

 = [1]

 =

 = 1 – 0.4404 – 0.0981 [1]

 = 0.4615 [1]

 = 46.15 % [1]

**11** (a) sin(½∠*COD*) = 5/8 [1]

 ½∠*COD* = 0.675 rad.

 ∠*COD* = 1.350 rad. [1]

 (b) ∠*XAD =*∠*XBC* = π/2+0.675 = 2.246 rad. [1]

 Length of arc CD or arc CX or arc DX [1]

 Perimeter = 13(1.350) + 2 x 5 x 2.246 [1]

 = 40.01 cm [1] Accept 40.0 cm

 (c) Area of triangle OAB = ½(8)2sin(1.350) or 2 x ½(5)(√(82 - 52)) [1]

 = 31.223 / 31.225

 Area of sector OCD or Area of sector DAX or Area of sector CBX

 = ½(13)2(1.350) = ½(5)2(2.246) [1]

 = 114.075 cm2 = 28.075

 Area of shaded region = 114.075 – 31.223 – 2(28.075) [1]

 = 26.702 cm2 [1]

**Bahagian C**

**12** (a)(i) [1][1]

 (ii) [1][1][1]

 (b) (i) [1][1]

 [1]

 (ii) [1][1]

**13** (a)(i)

 

 (ii)

 

 

 (iii)

  [1]

 

 (b)

  [1]

 

**1**4 (a) [1]

 [1]

 [1]

 (b)

 

 (c)(i) 5000 **  [1]

 (ii) Maximum profit/ keuntungan maksimum = 50(6000) + 30(1000) [1][1]

 = RM 330000 [1]

**15** (a) *a=m+nt*

 *– 10 =m + n(0)*

 *m = – 10*  [1]

 

 (b)

 

 (c)

 