**#3**

(a) A; *y* = 0, 3*x* = 24  *x* = 8
 A(8, 0)

 B; *x* = 0, 4*y* = 24  *y* = 6
 B(0, 6)

 (b) M; *xm* = = 4, *ym* = = 3

 M(4, 3)

(c) *L*2: gradient = 
*y* = *x* – 2 (or equivalent)

(d) (i) M(4, 3), C(0, –2)
MC = 
 = 
 = 6.40

 (ii) A(8, 0), C(0, –2)
AC = 
 = 
 = 8.25

(e) (i)

 

 cos M = 
= 
= 91.8° (3 s.f.)

(ii) Area of CMA =  × 5 sin 91.8°
= 15.99991171...
= 16.0 (3 s.f.)

**#4**

 (a) 2925 = 12*r* + *s* (M2)
4525 = 20*r* + *s* (M2)

 1600 = 8*r*
200 = *r* (A2) (C6)

(b) 2925 = 12(200) + *s*
525 = *s* (A2) (C2)

**Note:** Award (C2)(C2) if the candidate correctly solves an incorrect system of equations.

**#5**

(a)iv

(b)i

(c)ii

(d)v

**#6**

(a) i) a = 3 ii) b = 2 1/3

(b) y = 2

**#7**

 (a) A( –1.79, 0.789) and B(1.14, 2.70) (C2)(C2)

**Notes:** Award (C2) for each pair of coordinates obtained from the GDC

Award (A1)(A2)(ft) if bracket is not used.

(b) –1.79  *x*  1.14 (A1)(ft)(A1)(ft) (C2)

**Note:** Award (A1) for both numbers, (A1) for correct inequalities.