

NON-CALCULATOR SECTION

① a) 5 POINTS

$V(1,4) y_{int}(0,5)$

extras:  $(2,5)(3,8)(-1,8)$

b) 5 POINTS

$V(-2,3) y_{int}(0,-5)$

extras:  $(-4,-5)(-1,1)(-3,1)$

② a)  $18+27i$  b)  $6+6i$  c)  $3-4i$  d)  $7+6i$  e) 7 f)  $5+12i$   
g)  $2+8i$  h)  $-3+14i$  i) 26③ a)  $6i$  b)  $10i$  c)  $9i$  d)  $7i$   
e)  $2i\sqrt{5}$  f)  $2i\sqrt{7}$  g)  $10i\sqrt{3}$  h)  $i\sqrt{42}$ CALCULATOR SECTION① a)  $x = \frac{1}{2}$  b)  $x = 3 \pm 2\sqrt{3}$  c)  $x = \pm 3i\sqrt{2}$  d)  $x = -2$   
 $x = -\frac{4}{3}$   $x = -4$ 

e)  $x = -5 \pm 10i$  f)  $x = \frac{-2 \pm i\sqrt{2}}{3}$

g)  $x = 5$

h)  $x = \frac{1 \pm 2\sqrt{3}}{3}$

⑥ a)  $(5,3) + (0,-2)$  b)  $(-3,4) + (1,0)$  c)  $(1,3)$  d)  $(6,13) + (1,3)$ 7. UP,  $x = -1$ ,  $V(-1,4)$  MIN  $(0,6)$  NO x-INTS Equation)DOWN, MAX,  $x = 1$ ,  $V(1,4)$   $(0,3)$ ,  $(-1,0)$  (30) (Graph)a) NO b)  $g(x)$  c)  $f(x)$  goes up forever d) none8. a)  $(2,-2)$   $(-1,-4)$   $(-4,-4)$ 

b) all mins

c) tie between last 2, both bottom out at  $y = -4$