

Dr. Z.'s Math 354 REAL Quiz #3

NAME: (print!) _____

E-MAIL ADDRESS: (print!) _____

1. (a) (4 points) Draw the hexagon $ABCDEF$ whose points (in the clockwise direction) are

$A = (15, 0)$, $B = (5, 12)$, $C = (10, 17)$, $D = (15, 12)$, $E = (20, 17)$, $F = (25, 12)$.

(b) (4 points) Decide whether the region inside this hexagon is a convex set. **EXPLAIN!**

[No credit for just a Yes/No answer. For example, if the answer is 'No' come up with two **specific** points inside this region such that the line segment joining them is not totally included in that region, and if the answer is 'Yes' prove that for any two points inside this region the line segment joining them is included inside the above hexagon.]