

## 2020W A33 Quiz 1 T10 Rubric

[Q1a]

3 marks -  $z = ax - by$ ,  $z = ax + b$

any function where as  $Z$  decreases, it moves towards from the origin to achieve a minimum.

$Z = ax - by$ ,  $z = ax + b$ , as long as  $a > 0$ .

[Q1b]

misled ppl in this particular tutorial, everyone 3/3

[Q2]

1 mark \* 3 - each correct inequality direction(excluding  $x, y \geq 0$ )

1 mark \* 3 - each correct line(excluding  $x, y \geq 0$ )

1 mark - by LP theorem(0.5), the region  $R$  is empty(0.5)

(-0.5 total if any line not labelled)

(-0.5 total if any corner pt not labelled)

(-0.5 total if feasible region 'R' not shown)

[Q3a]

1 mark - objective function

2 marks - teaching, admin constraints on A32, A33

2 mark - minimum 30 students constraints on A32, A33

1 mark - process of determining corner points

1 mark - process of determining revenue

1 mark - correct answer(0.5 if calculation error)

[Q3b]

2 marks - determine new constraint is  $x = y$

2 mark - correct corner points(0.5 if calculation error)

[Q4]

3 marks - process of determining corner points

1 mark - correct answer for max(0.5 if calculation error)

1 mark - correct answer for min(0.5 if calculation error)