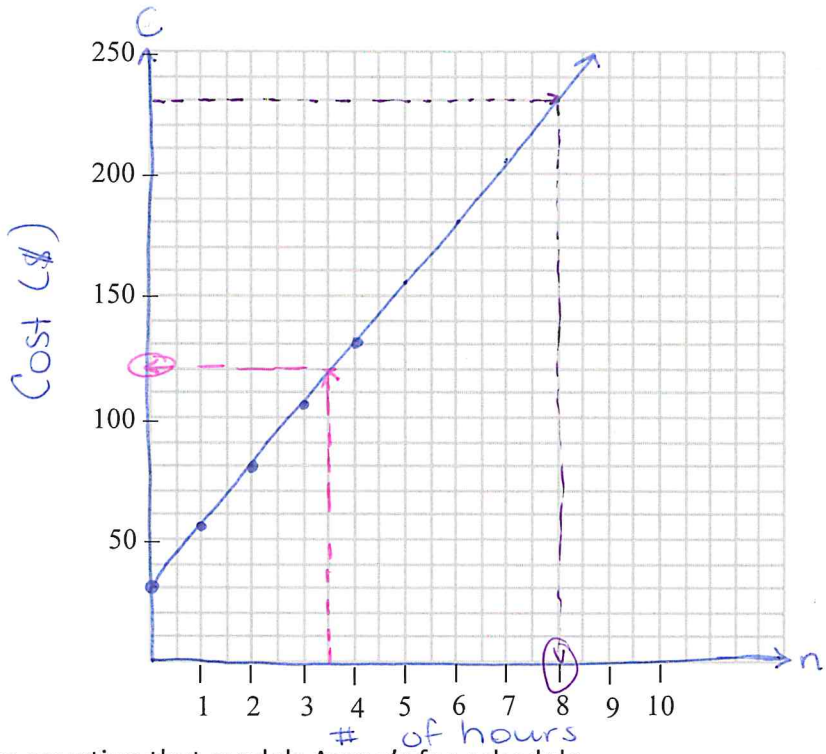
APPLICATION OF LINEAR RELATIONS

1) Aaron owns a television repair company. He charges $30 for making a house repair call plus $25 per hour in labour.

a) Graph the linear relation. The Table of Values shows his fee schedule, where ***C*** represents the total labour cost and ***n*** represents the number of hours of labour.

n	*C*
0	30
1	55
2	80
3	105
4	130



b) Using y = mx + b form, write the equation that models Aaron's fee schedule.

C = 25n + 30

c) What is the slope in this relationship?

m = 25

d) What does the slope represent in this problem?

The cost per hour

e) What is the y-intercept of this relationship?

30

f) What does the y-intercept represent in this problem?

The initial cost

g) By looking on the graph, how much would it cost to repair a television if the work took 3.5 hours?

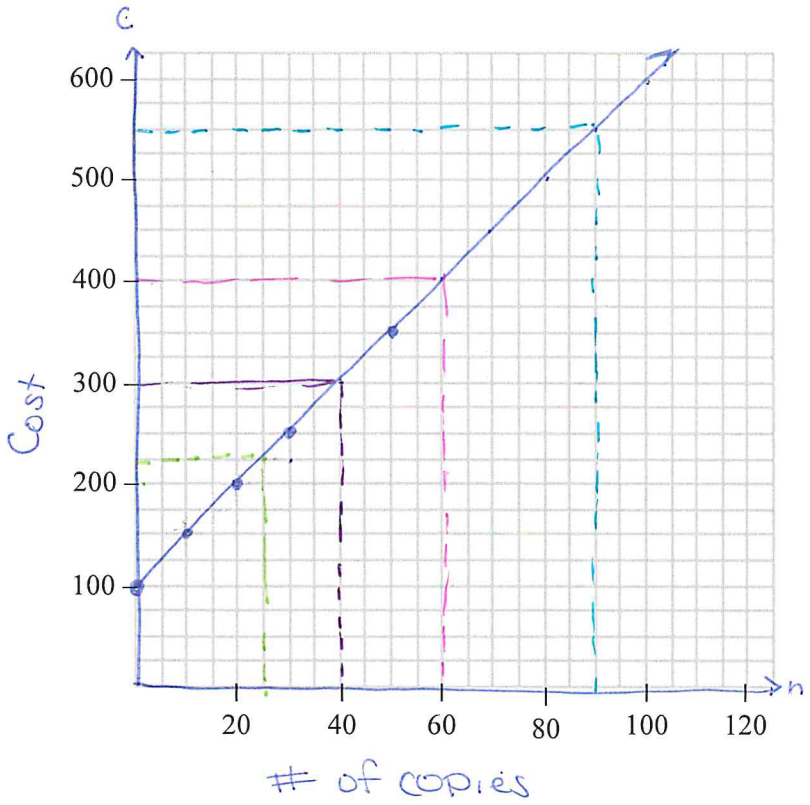
$120

h) By looking on the graph, how many hours of labour were required to repair a television if it cost of $230?

8 hrs

2) For the printing of a bound report, the Done Quick Printing Company charges customers $100 for printing set up costs and $5 per copy.

a) Graph the linear relation. The Table of Values shows the fee schedule, where ***C*** represents the total cost of printing and ***n*** represents the number of copies of a report printed.



n	*C*
0	100
10	150
20	200
30	250
50	350

b) Using y = mx + b form, write the equation that models this relationship.

C = 5n + 100

c) What is the slope of this relationship?

m = 5

d) What does the slope represent in this problem?

Cost per copy

e) What is the y-intercept of this relationship?

100

f) What does the y-intercept represent in this problem?

initial cost

g) By looking on the graph, how much would it cost to print:

i) 40 copies of a report? $300 ii) 60 copies of a report? $400

h) By looking on the graph, how many copies of the report were printed if it cost:

i) $225? 25 copies ii) $550? 90 copies