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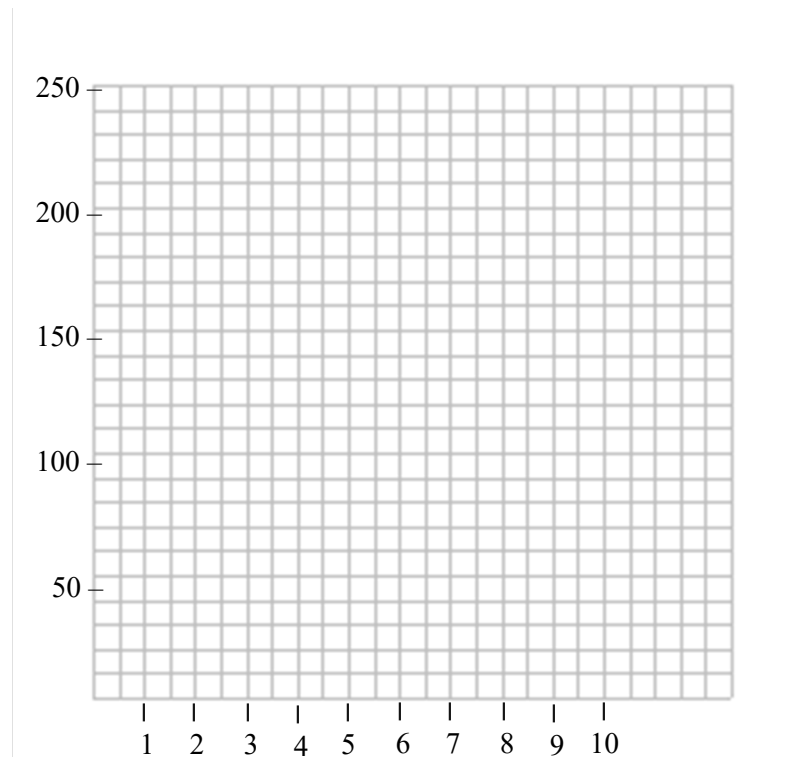
1) Aaron owns a television repair company. He charges $30 for making a house repair call plus $25 per hour in labour.

   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) What is the slope in this relationship?

d) What does the slope represent in this problem?

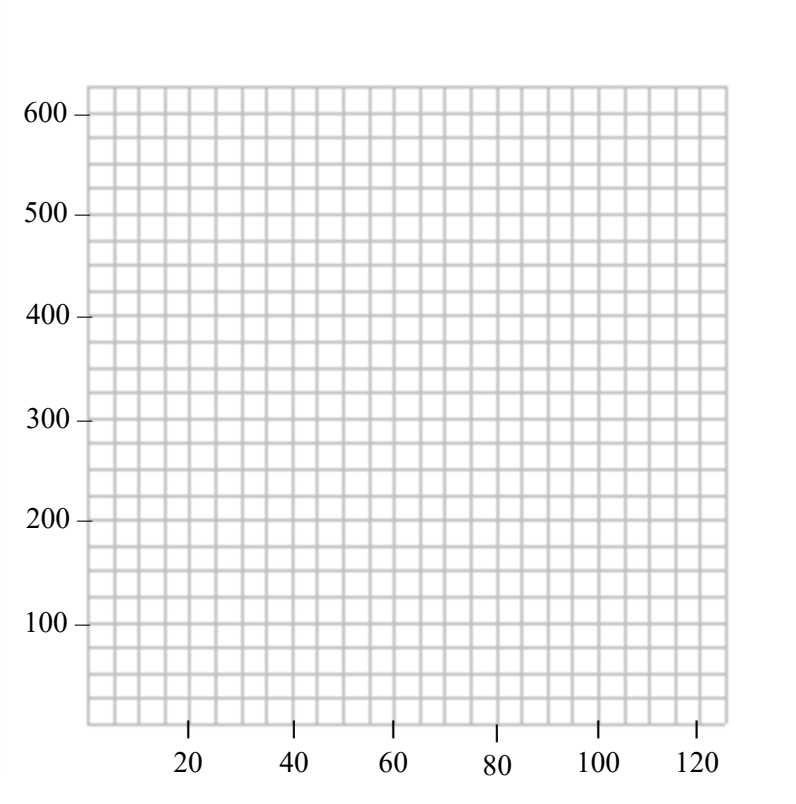e) What is the y-intercept of this relationship?

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

g) By looking on the graph, how much would it cost to repair a television if the work took 5 hours?

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

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

(Graph with vertical axis labeled 100, 200, 300, 400, 500, 600 and horizontal axis labeled 20, 40, 60, 80, 100, 120)

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

c) What is the slope of this relationship?

d) What does the slope represent in this problem?

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

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

g) By looking on the graph, how much would it cost to print:
        i) 40 copies of a report?   ii) 60 copies of a report?

h) By looking on the graph, how many copies of the report were printed if it cost:
        i) $225?   ii) $550?