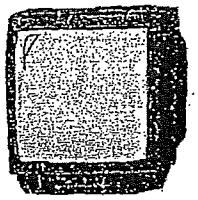
5.8: Finding m and b at different scales.

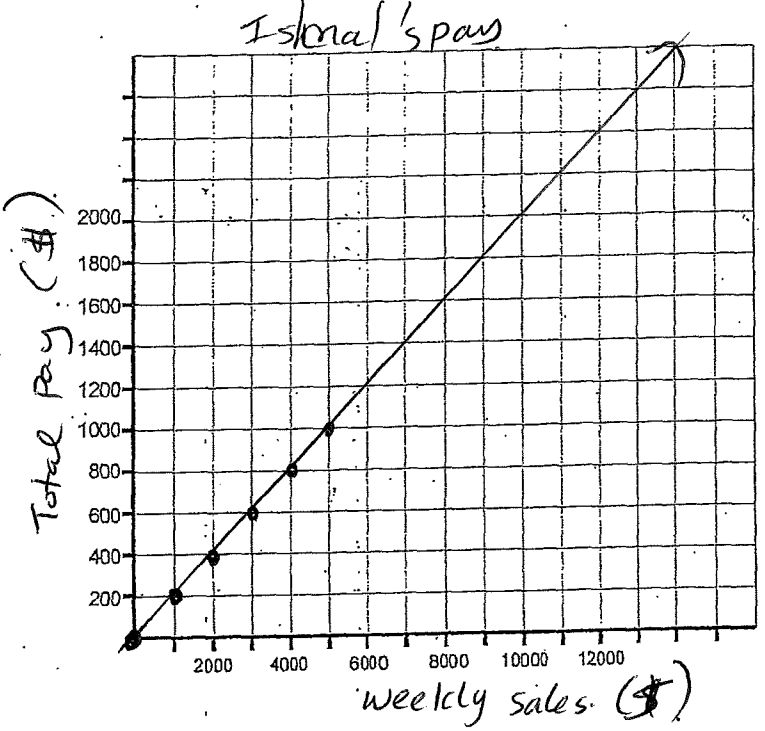


Ishmal sells high-definition televisions. He is paid a weekly salary of 20% commission of his total weekly sales. 0.20 × weekly sales.

a) Complete the table of values.

b) Graph the relationship.

Weekly Sales ($)	Total Pay ($)
0	0
1000	200
2000	400
3000	600
4000	800
5000	1000



$m = \frac{200}{1000} = 0.2$

$b = 0$

c) Write an equation to model the relationship.

$P = 0.2s + 0 = 0.2s$

[$y = 0.2x + 0$]

s is sales
P is Pay.

d) Determine Ishmal's pay if his sales for the week were $8000. Show your work.

$P = 0.2(8000)$
$= \$1600$

e) Ishmal made $975. How much were his weekly sales? Show your work.

↳ Pay.

$975 = 0.2s$

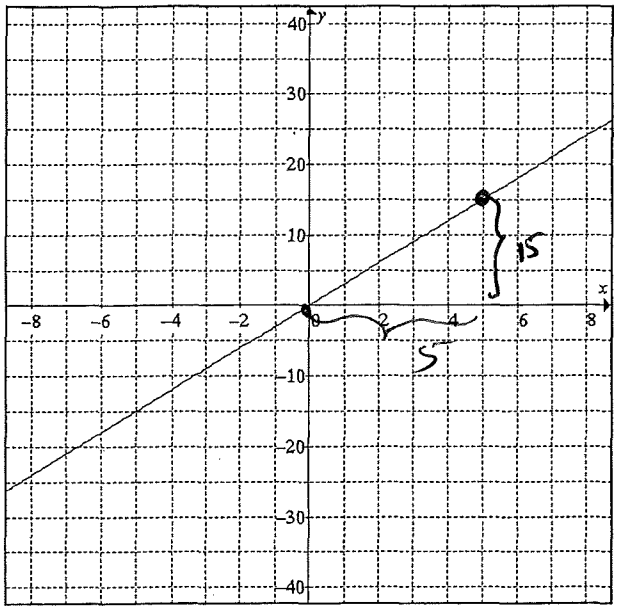
Sales = $ 4875

∴ His weekly sales were $4875.

Mathematics 9

Finding m and b at Different Scales

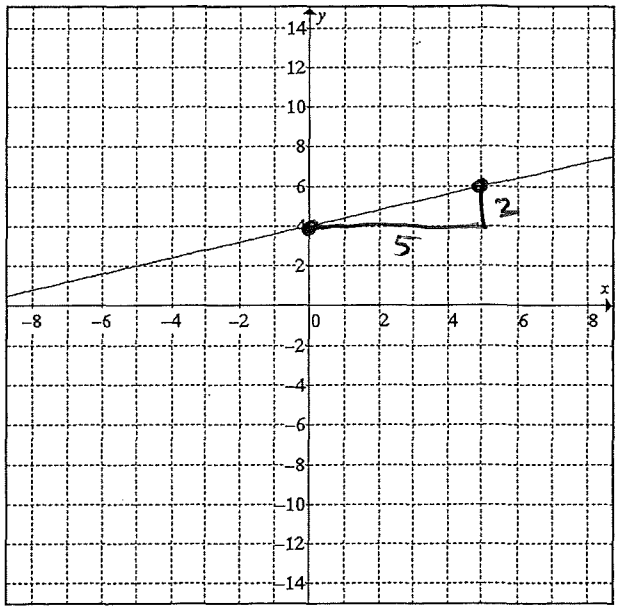
Date:



$m = \frac{15}{5} = 3$ | $b = 0$

1. Equation of line:

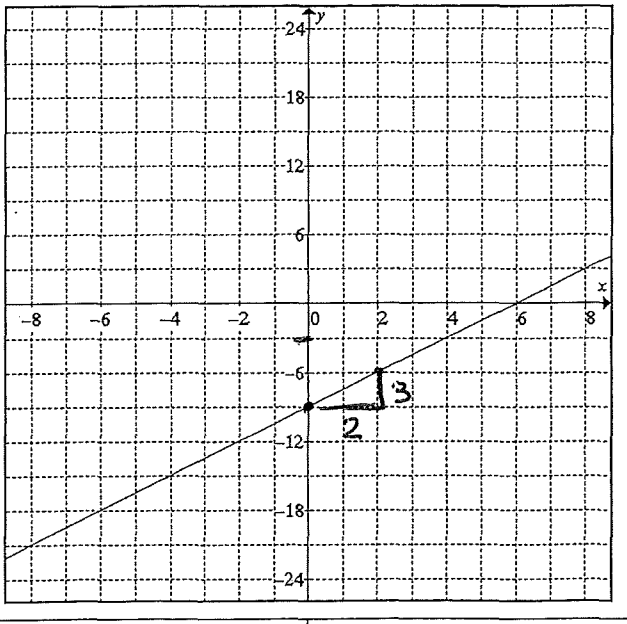
$y = 3x + 0$ or $y = 3x$



$m = \frac{2}{5}$ | $b = 4$

2. Equation of line:

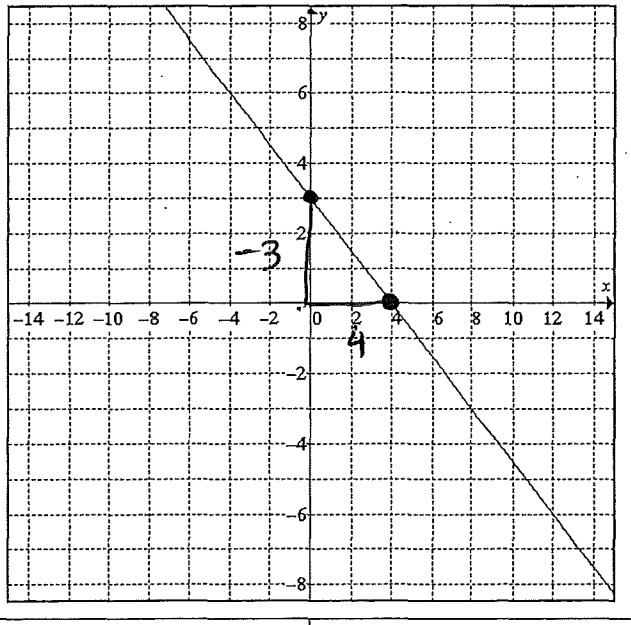
$y = \frac{2}{5}x + 4$



$m = \frac{3}{2}$ | $b = -9$

3. Equation of line:

$y = \frac{3}{2}x - 9$



$m = -\frac{3}{4}$ | $b = 3$

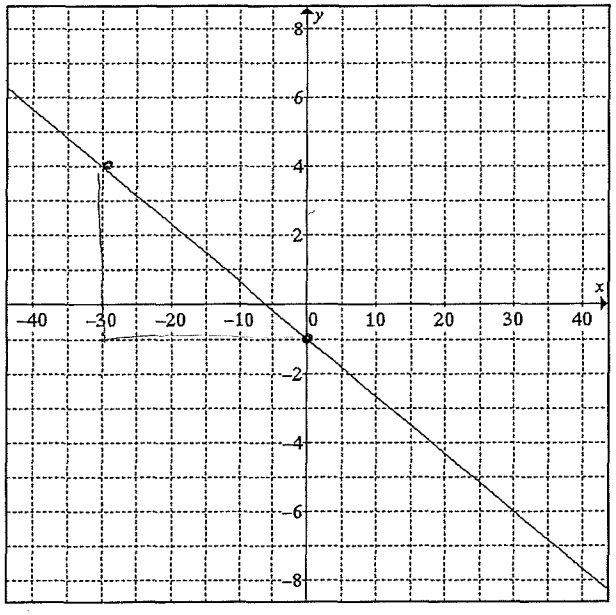
4. Equation of line:

$y = -\frac{3}{4}x + 3$

Mathematics 9

Finding m and b at Different Scales

Date:

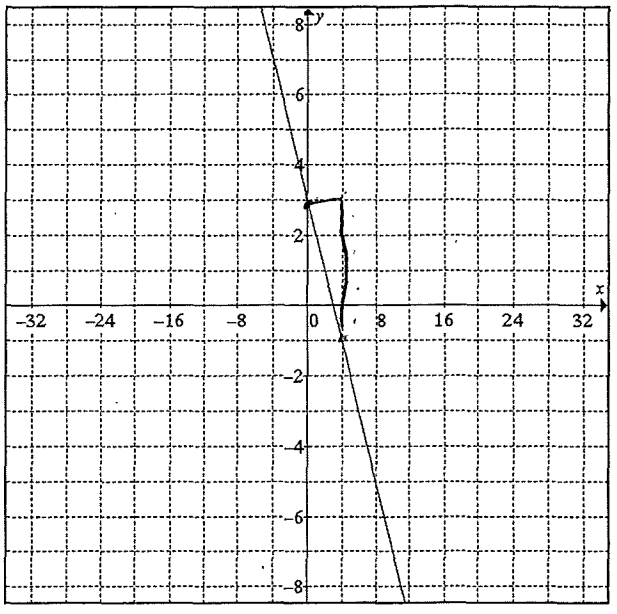


$m = \frac{-5}{30} = \frac{-1}{6}$

$b = -1$

5. Equation of line:

$y = \frac{-1}{6}x - 1$

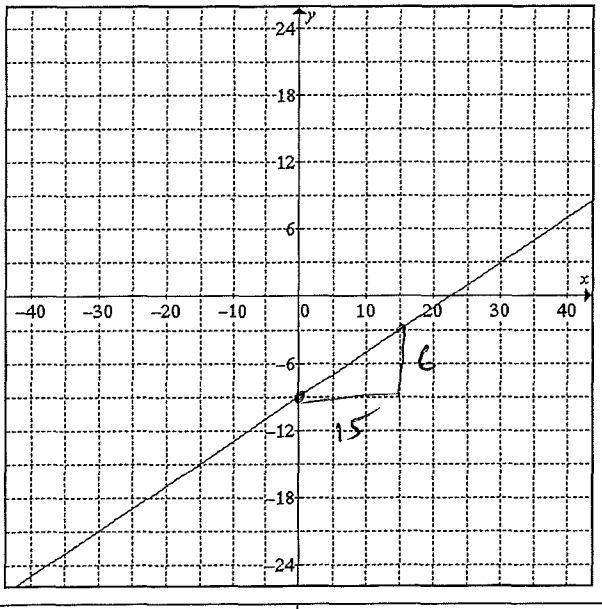


$m = -\frac{4}{1} = -4$

$b = 3$

6. Equation of line:

$y = -4x + 3$

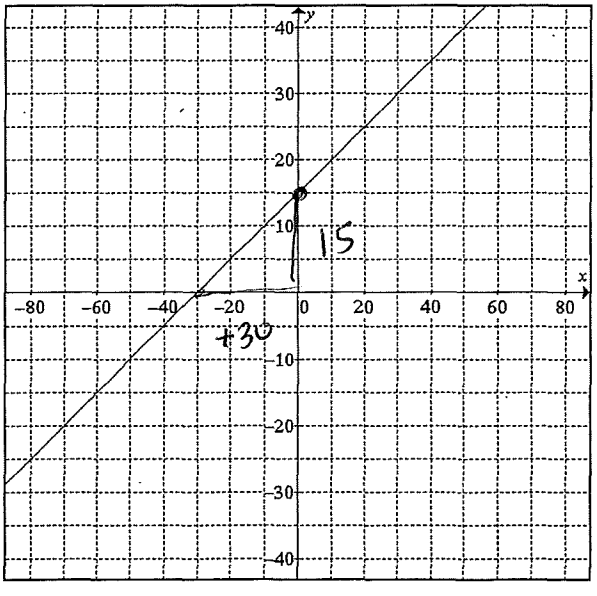


$m = \frac{6}{15} = \frac{2}{5}$

$b = -9$

7. Equation of line:

$y = \frac{2}{5}x - 9$



$m = \frac{15}{30} = \frac{1}{2}$

$b = 15$

8. Equation of line:

$y = \frac{1}{2}x + 15$