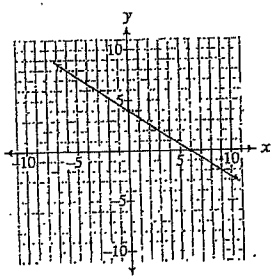
Chapter 6 Provincial Exam Q's

Non-Calc

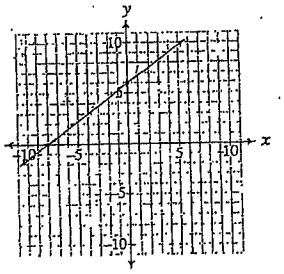
1) Which graph represents $y=-\frac{3}{4}x+6$?

slope, y-intercept

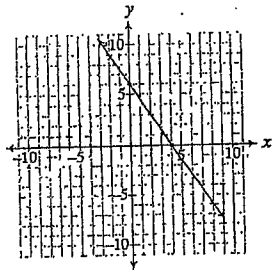
A.



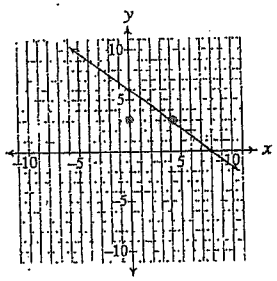
B.



C.



D.



2) Write an equation for the line that passes through U(3, –7) and is perpendicular to the line $y=\frac{1}{7}x-9$.

A. $y+7=-\frac{1}{7}(x+3)$

B. $y-7=7(x+3)$

C. $y+7=-7(x-3)$

D. $y+7=7(x-3)$

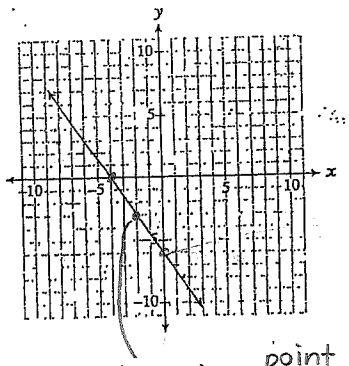
x_1 y_1

$y=\frac{1}{7}x-9$ → perp. slope is $\frac{-7}{1}$ (negative reciprocal)

$y-y_1=m(x-x_1)$

$y-(-7)=-7(x-3) \Rightarrow y+7=-7(x-3)$

3) Which of the following equations, in slope-point form, represents the graph below?



slope $=\frac{-6}{4}=\frac{-3}{2}$

(–2, –3) point

x_1 y_1

$y-y_1=m(x-x_1)$

$y+3=\frac{-3}{2}(x+2)$

A. $y+3=-\frac{2}{3}(x+2)$

B. $y-3=-\frac{2}{3}(x-2)$

C. $y-3=-\frac{3}{2}(x-2)$

D. $y+3=-\frac{3}{2}(x+2)$

x_1 y_1 x_2 y_2

4) Determine the slope from P(–5, 8) to Q(3, –4).

A. –2

B. $-\frac{3}{2}$

C. $-\frac{1}{2}$

D. $\frac{3}{2}$

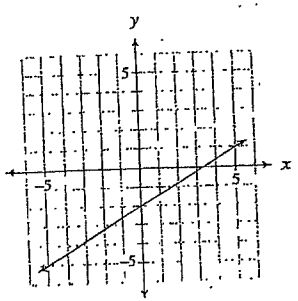
$m=\frac{y_2-y_1}{x_2-x_1}=\frac{-4-8}{3-(-5)}=\frac{-12}{8}=\frac{-3}{2}$

$5x - 3y - 6 = 0$
$-5x \quad +6 \quad -5x + 6$
$\frac{-3y}{-3} = \frac{-5x}{-3} + \frac{6}{-3}$

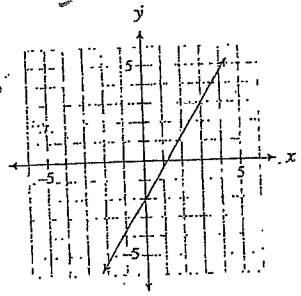
$y = \frac{5}{3}x - 2$

5) Which graph represents the relation $5x - 3y - 6 = 0$?

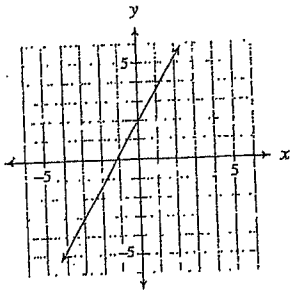
A.



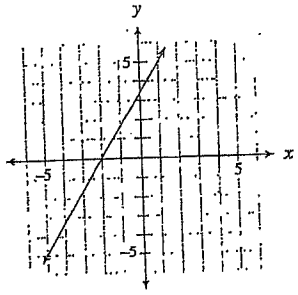
B.



C.



D.



6) Determine the intercepts of the linear relation $2x - 3y - 18 = 0$.

	x-intercept	y-intercept
A.	9	–6
B.	9	6
C.	–9	–6
D.	–9	6

x-intercept
↳ when $y = 0$
$2x - 3(0) - 18 = 0$
$2x - 18 = 0$
$+18 \quad +18$
$\frac{2x}{2} = \frac{18}{2}$ $x = 9$

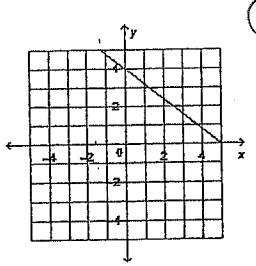
y-intercept
↳ when $x = 0$
$2(0) - 3y - 18 = 0$
$+18 \quad +18$
$\frac{-3y}{-3} = \frac{18}{-3}$ $y = -6$

$4x - 5y - 20 = 0$
$-4x \quad +20 \quad -4x + 20$
$\frac{-5y}{-5} = \frac{-4x}{-5} + \frac{20}{-5}$

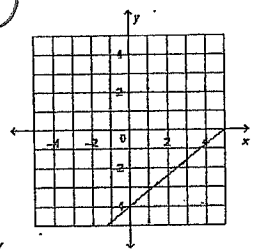
$y = \frac{4}{5}x - 4$

7) Which graph represent the equation $4x - 5y - 20 = 0$?

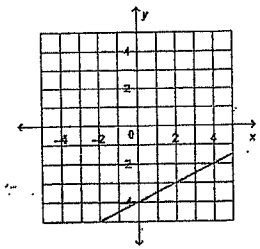
A.



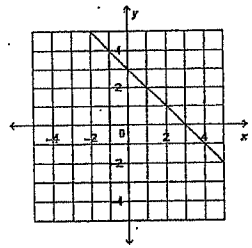
C.



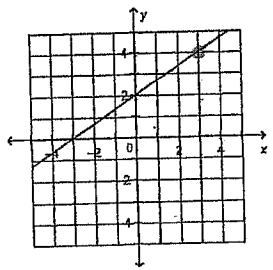
B.



D.



8) Which of the following equations describes the linear relation graphed below?



I	$y = \frac{2}{3}x + 2$
II	$y - 4 = \frac{2}{3}(x - 3)$
III	$3x - 2y + 2 = 0$

A. I, II, and III
B. I and II
C. II and III
D. I and III

(3,4) is a point on the line

$3x - 2y + 2 = 0$
$-3x \quad -2 \quad -3x - 2$
$\frac{-2y}{-2} = \frac{-3x}{-2} \frac{-2}{-2}$
$y = \frac{3}{2}x + 1$ wrong y-intercept