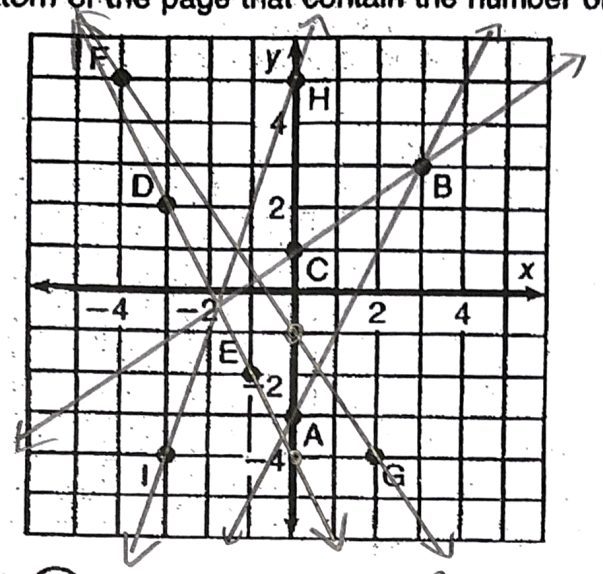
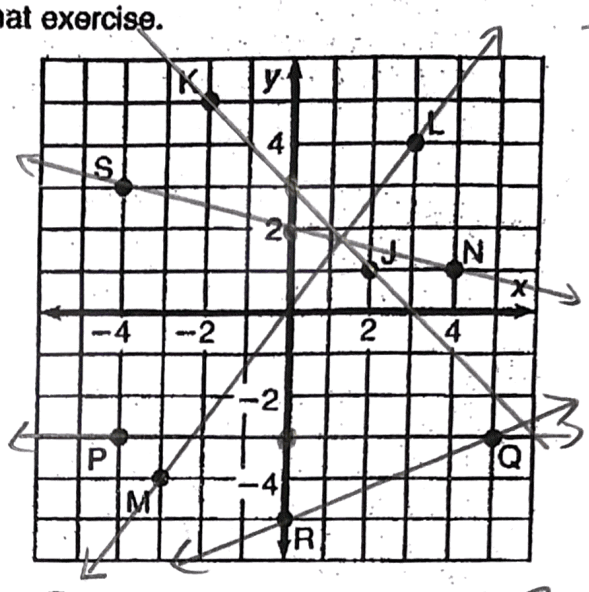
FOM 10 Ch. 5 Graphing Puzzles Name: KEY Block:

What Did the Ape Think of the Grape's House?

For each exercise, draw the line indicated and write its equation. Find your answer in the answer section and notice the two letters next to it. Print these letters in the two boxes at the bottom of the page that contain the number of that exercise.





AS (1) Equation of $\overleftrightarrow{AB}$ $y = 2x - 3$

NE (2) Equation of $\overleftrightarrow{CB}$ $y = \frac{2}{3}x + 1$

TH (3) Equation of $\overleftrightarrow{DE}$ $y = -2x - 4$

GH (4) Equation of $\overleftrightarrow{FG}$ $y = -\frac{3}{2}x - 1$

HE (5) Equation of $\overleftrightarrow{HI}$ $y = 3x + 5$

OU (6) Equation of $\overleftrightarrow{JK}$ $y = -x + 3$

TI (7) Equation of $\overleftrightarrow{LM}$ $y = \frac{4}{3}x$

DE (8) Equation of $\overleftrightarrow{NS}$ $y = -\frac{1}{4}x + 2$

TW (9) Equation of $\overleftrightarrow{PQ}$ $y = -3$

VI (10) Equation of $\overleftrightarrow{RQ}$ $y = \frac{2}{5}x - 5$

Answers:

(DE) $y = -\frac{1}{4}x + 2$

(SA) $y = \frac{4}{3}x - 1$

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

(AS) $y = 2x - 3$

(HE) $y = 3x + 5$

(TT) $y = \frac{2}{5}x$

(NE) $y = \frac{2}{3}x + 1$

(OU) $y = -x + 3$

(GH) $y = -\frac{3}{2}x - 1$

(TW) $y = -3$

(EA) $y = -2x + 3$

(VI) $y = \frac{2}{5}x - 5$

(TH) $y = -2x - 4$

(TI) $y = \frac{4}{3}x$

(SH) $y = \frac{2}{3}x + 5$

5	5	3	3	6	6	4	4	7	7	9	9	1	1	8	8	10	10	2	2
H	E	T	H	O	U	G	H	T	I	T	W	A	S	D	E	V	I	N	E

So good!

KEY

According to Some Students, What Is the True Purpose of Homework?

Write each equation below in slope-intercept form. Then find the slope and *y*-intercept at the bottom of the page. Write the letter of the exercise above them.

(O) $2x + 5y = 10$ → $y = -\frac{2}{5}x + 2$

(N) $4x + 3y = 9$ → $y = -\frac{4}{3}x + 3$

(L) $-2x + 3y = -21$ → $y = \frac{2}{3}x - 7$

(I) $-x + 4y = 20$ → $y = \frac{1}{4}x + 5$

(A) $3x - 5y = 5$ → $y = \frac{3}{5}x - 1$

(U) $-7x - 4y = 16$ → $y = -\frac{7}{4}x - 4$

(R) $4x - 2y = 7$ → $y = 2x - \frac{7}{2}$

(I) $9x + 3y = 1$ → $y = -3x + \frac{1}{3}$

(S) $6x - y = 4$ → $y = 6x - 4$

(G) $4x + 3y = 8$ → $y = -\frac{4}{3}x + \frac{8}{3}$

(N) $5x - 9y = -7$ → $y = \frac{5}{9}x - \frac{7}{9}$

(F) $-2x + 7y = 0$ → $y = \frac{2}{7}x + 0$

(T) $12x = 2y + 1$ → $y = 6x - \frac{1}{2}$

(F) $x + 4 = 4y$ → $y = \frac{1}{4}x + 1$

(H) $4x - 6y + 3 = 0$ → $y = \frac{2}{3}x + \frac{1}{2}$

(V) $y - 2 = 0$ → $y = 2$ → horizontal, so $m = 0$ (or) $y = 0x + 2$

	I	T	S		F	O	R		H	A	L	V	I	N	G		F	U	N
slope	$\frac{1}{4}$	6	6	−3	$\frac{2}{7}$	$-\frac{2}{5}$	2	$\frac{1}{4}$	$\frac{2}{3}$	$\frac{3}{5}$	$\frac{2}{3}$	0	−3	$-\frac{4}{3}$	$-\frac{4}{3}$	$\frac{2}{3}$	$\frac{1}{4}$	$-\frac{7}{4}$	$\frac{5}{9}$
y-intercept	5	$-\frac{1}{2}$	−4	2	0	2	$-\frac{7}{2}$	$-\frac{7}{2}$	$\frac{1}{2}$	−1	−7	2	$\frac{1}{3}$	3	$\frac{8}{3}$	−1	1	−4	$\frac{7}{9}$

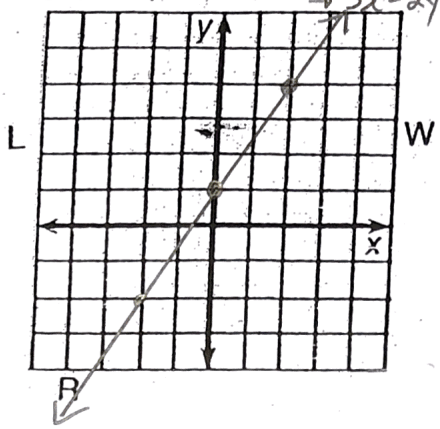
waahaahaa!

turn into $y=mx+b$, (or) use slope shortcut $\left(m=\frac{-A}{B}\right)$ (C) and y-int by setting $x=0$

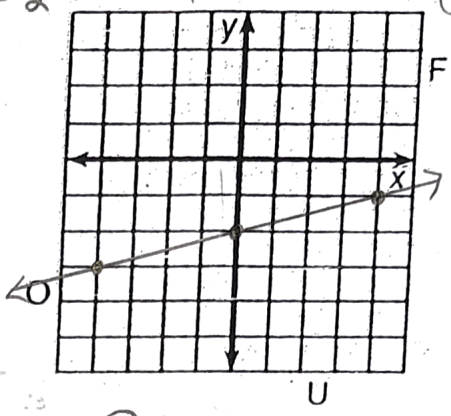
Why Does a Poor Man Drink Coffee?

Use the slope and *y*-intercept to graph each equation below. The graph, if extended, will cross a letter. Print this letter in each box that contains the number of that exercise.

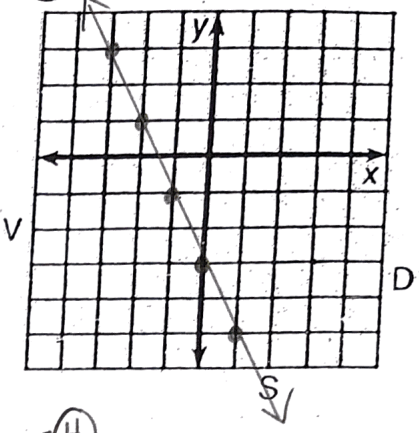
(R) = (1) $-3x + 2y = 2$ → $3x-2y=-2$



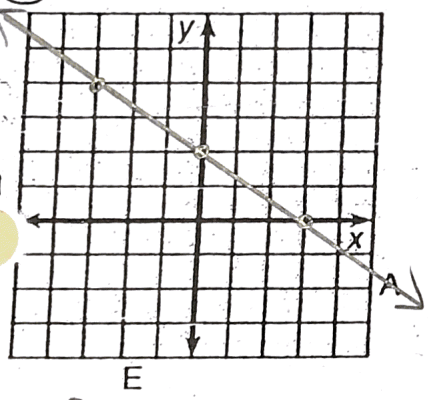
(O) = (2) $x - 4y = 8$



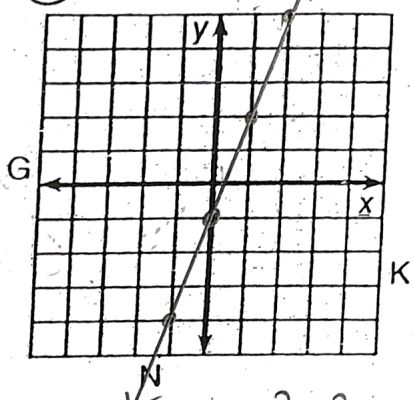
(S) = (3) $2x + y = -3$



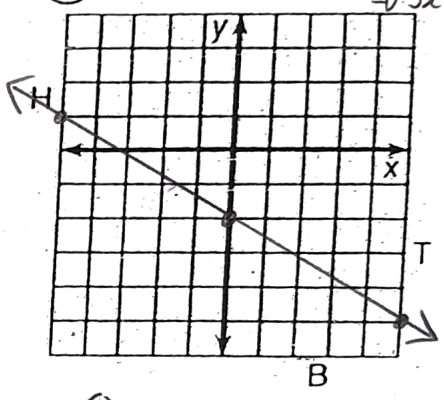
(A) = (4) $2x + 3y = 6$



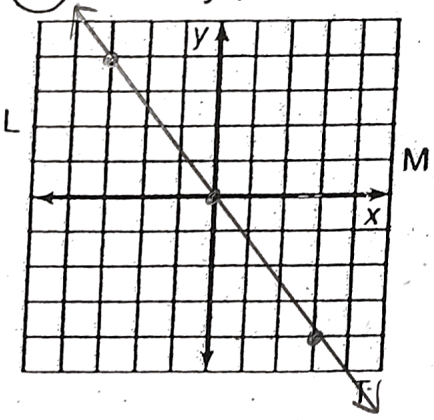
(N) = (5) $3x - y = 1$



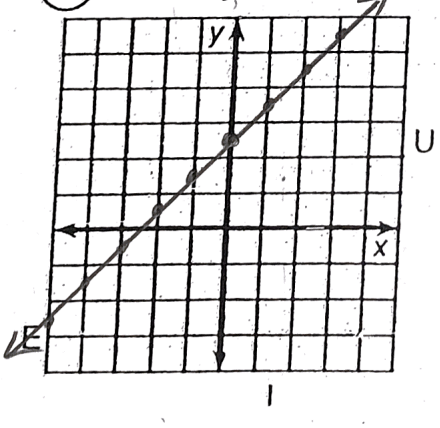
(H) = (6) $-3x - 5y = 10$ ⇒ $3x+5y=-10$



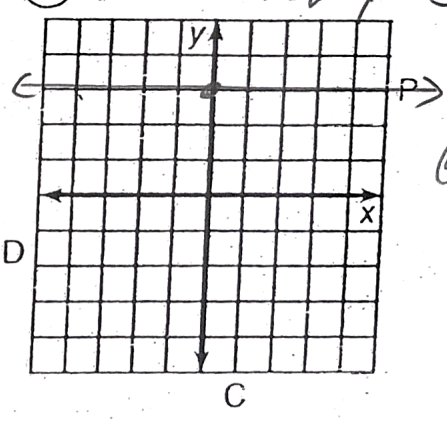
(T) = (7) $4x + 3y = 0$



(E) = (8) $2x - 2y + 5 = 0$ ⇒ $2x-2y=-5$



(P) = (9) $y - 3 = 0$ ⇒ $y = 3$



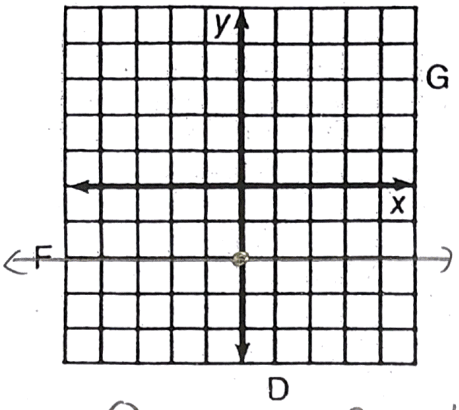
horiz. line @ $y=3$!

6	8	6	4	3	5	2	9	1	2	9	8	1	7	8	4
H	E	H	A	S	N	O	P	R	O	P	E	R	T	E	A

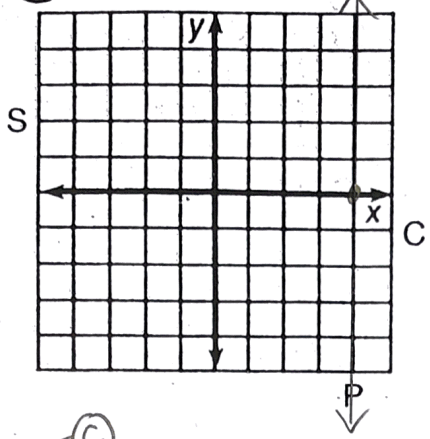
Why Did the Cow Want a Divorce?

Graph each equation below. The graph, if extended, will cross a letter. Look for this letter in the string of letters near the bottom of the page and CROSS IT OUT each time it appears. When you finish, write the remaining letters in the rectangle at the bottom of the page.

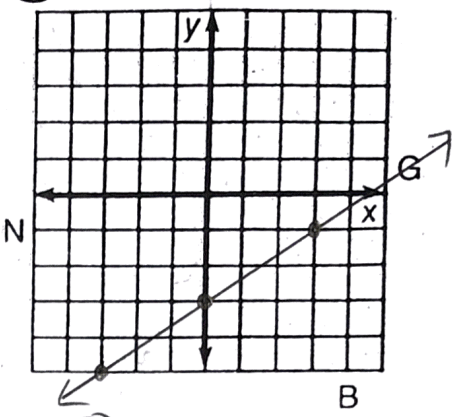
(1) (F) $y = -2$ horizontal



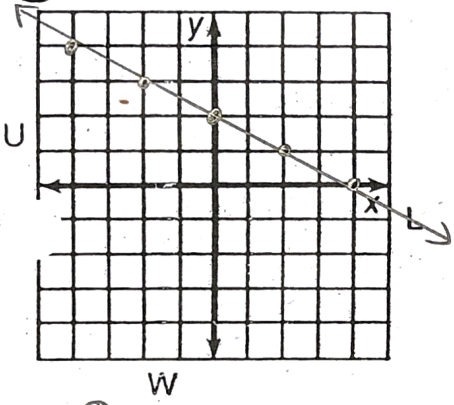
(2) (P) $x = 4$ vertical



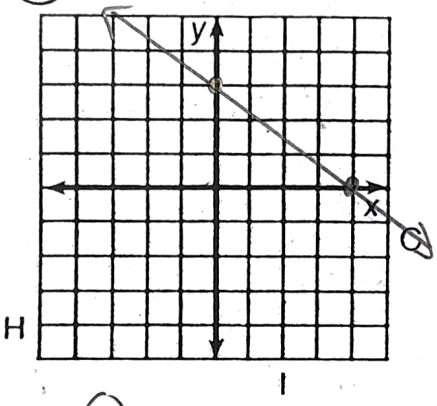
(3) (G) $2x - 3y = 9$



(4) (L) $x + 2y - 4 = 0$ ⇒ $x + 2y = +4$

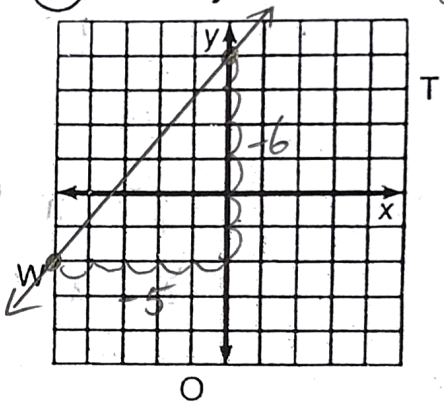


(5) (C) $3x + 4y = 12$

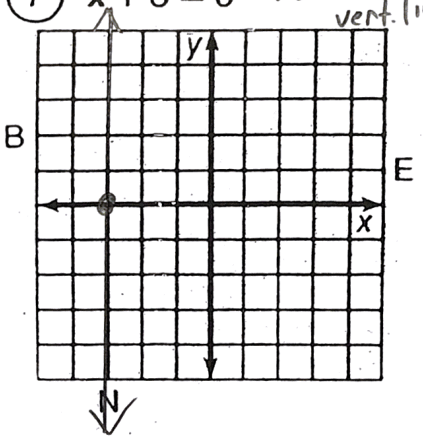


(6) (W) $6x - 5y + 20 = 0$ ⇒ $6x - 5y = -20$

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



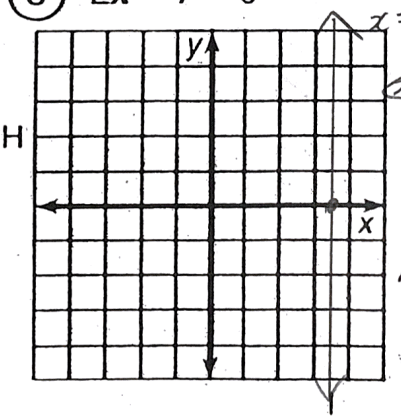
(7) (N) $x + 3 = 0$ ⇒ $x = -3$ vert. line



(8) (I) $2x - 7 = 0$ ⇒ $2x = 7$

$x = \frac{7}{2}$

$x = 3.5$



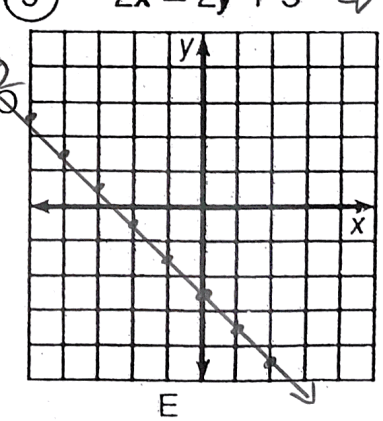
(9) (O) $-2x = 2y + 5$ ⇒ $-2x - 2y = 5$

$-2y \quad -2y$

so... $2x + 2y = -5$

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

$y = -x - 2.5$



~~S~~ ~~H~~ ~~O~~ ~~W~~ E ~~H~~ ~~O~~ ~~F~~ A ~~M~~ D A ~~P~~ ~~L~~ B ~~O~~ ~~U~~ ~~L~~ ~~F~~ ~~G~~ M S ~~P~~ T ~~O~~ ~~W~~ E ~~I~~ E R ~~N~~

Answer: She had a bum steer

(meaning he wasn't a good cow... ROFL!)

OBJECTIVE 5–m: To graph a line given its equation (includes vertical lines).