Números Racionales

Aprendizaje Activo:

Practica # 17

(1) Escribe como Número racional cada una de las siguientes divisiones,

(a) $2 \div 7 = \frac{2}{7}$

(b) $5 \div 9 = \frac{5}{9}$

(c) $11 \div 3 = \frac{11}{3}$

(d) $18 \div 13 = \frac{18}{13}$

(e) $8 \div (-27) = \frac{8}{-27}$

(f) $-9 \div 16 = -\frac{9}{16}$

(g) $25 \div (-3) = -\frac{25}{3}$

(h) $-49 \div (-22) = \frac{49}{22}$

(i) $2 \div 4 = \frac{2}{4}$

(j) $14 \div 20 = \frac{14}{2}$

(k) $-30 \div (-45) = \frac{30}{45}$

(l) $-27 \div 15 = \frac{-27}{15}$

(m) $42 \div (-36) = -\frac{42}{36}$

(n) $81 \div 27 = \frac{81}{27}$

(o) $-700 \div 25 = -\frac{100}{}$

Escaneado con CamScanner

② Identifica en cada grupo de fracciones los números racionales

a) $\frac{15}{3}$ (N), $\frac{9}{4}$ (N), $\frac{7}{15}$ (R), $\frac{35}{14}$ (N), $-\frac{8}{24}$ (R)

b) $\frac{-5}{21}$ (R), $\frac{4}{10}$ (R), $\frac{2}{7}$ (R), $-\frac{11}{33}$ (R), $-\frac{36}{72}$ (R)

c) $\frac{28}{35}$ (R), $-\frac{39}{26}$ (R), $\frac{34}{17}$ (N), $-\frac{38}{57}$ (R), $\frac{43}{84}$ (R)

d) $\frac{9}{12}$ (R), $\frac{5}{13}$ (R), $\frac{12}{81}$ (R), $-\frac{38}{69}$ (R), $-\frac{51}{22}$ (N)

e) $\frac{25}{10}$ (N), $-\frac{4}{18}$ (R), $\frac{18}{25}$ (R), $\frac{27}{8}$ (N), $-\frac{15}{14}$ (N)

f) $\frac{13}{39}$ (R), $\frac{12}{15}$ (R), $-\frac{9}{14}$ (R), $\frac{23}{46}$ (R), $-\frac{34}{39}$ (R)

g) $\frac{-32}{15}$ (N), $\frac{8}{27}$ (R), $\frac{15}{9}$ (N), $-\frac{36}{49}$ (R), $\frac{42}{35}$ (R)

h) $\frac{34}{17}$ (N), $-\frac{95}{36}$ (R), $\frac{17}{4}$ (N), $\frac{19}{38}$ (R), $-\frac{4}{7}$ (R)

i) $\frac{28}{9}$ (N), $\frac{35}{48}$ (R), $-\frac{25}{100}$ (R), $\frac{14}{3}$ (N), $\frac{20}{18}$ (R)

Escaneado con CamScanner

(j) $\frac{12}{39}$ (P), $\frac{25}{42}$ (P), $-\frac{28}{9}$ (N), $\frac{15}{40}$ (P), $-\frac{13}{29}$ (P)

Aprendizaje Activo:

(2) Hallar el factor de Amplificación y el término que falta para obtener una fracción equivalente con:

$\frac{7}{4} = \frac{(9)}{36}$

Práctica 18

(1) Halla cinco fracciones equivalentes con el número racional dado en donde los factores de amplificación sean 3, 7, 9, 12 y 21.

	3	7	9	12	21
a $\frac{3}{5}$	$\frac{9}{15}$	$\frac{21}{35}$	$\frac{27}{45}$	$\frac{36}{60}$	$\frac{63}{105}$
b $\frac{3}{4}$	$\frac{9}{12}$	$\frac{21}{28}$	$\frac{27}{36}$	$\frac{36}{48}$	$\frac{63}{84}$
c $-\frac{10}{13}$	$-\frac{30}{39}$	$-\frac{70}{91}$	$-\frac{630}{117}$	$-\frac{120}{156}$	$-\frac{210}{273}$
d $-\frac{11}{5}$	$-\frac{33}{15}$	$-\frac{77}{35}$	$-\frac{99}{45}$	$-\frac{132}{60}$	$-\frac{231}{105}$

Escaneado con CamScanner

② Halla el factor de amplificación y la fracción equivalente en cada caso

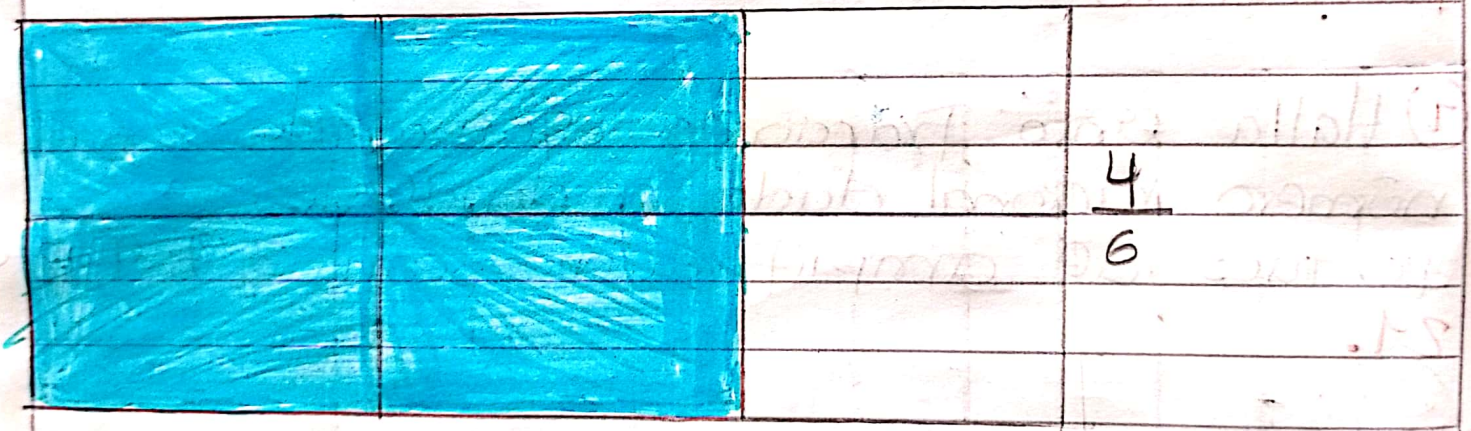
c) $\frac{11}{9} = \frac{(8)}{72}$

① $\frac{-2}{15} = -\frac{(3)}{45}$

Práctica 19

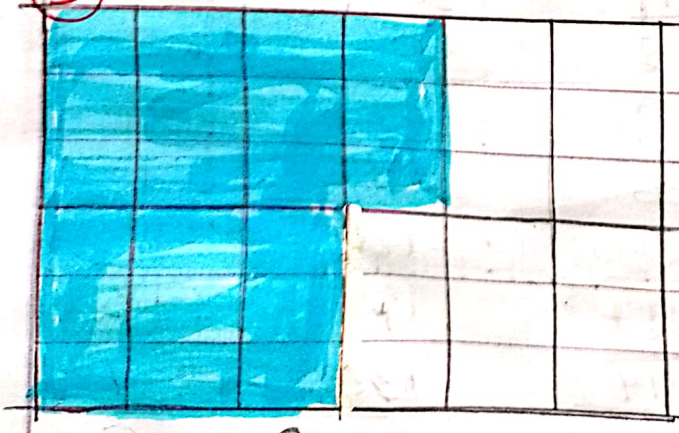
③ Escribe la fracción representada en cada una de las siguientes gráficas:

②



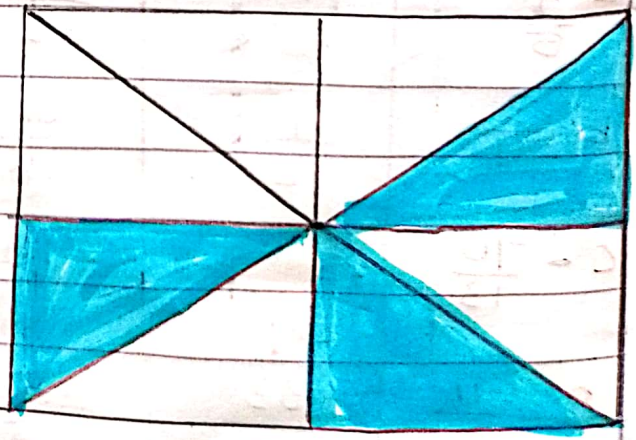
$\frac{4}{6}$

b)



$\frac{7}{12}$

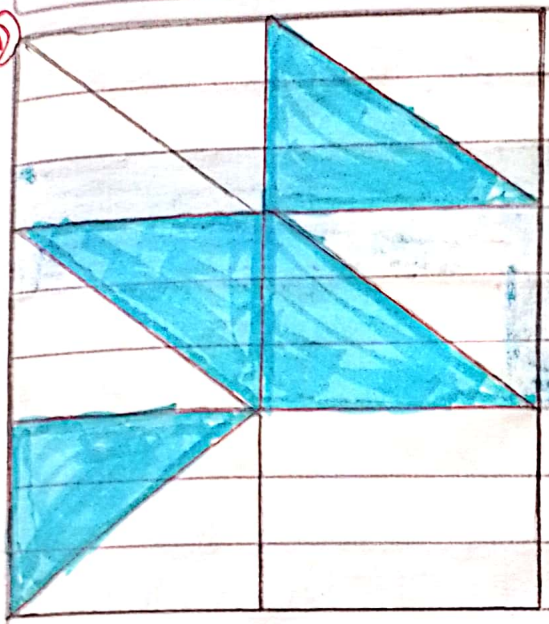
c)



$\frac{3}{8}$

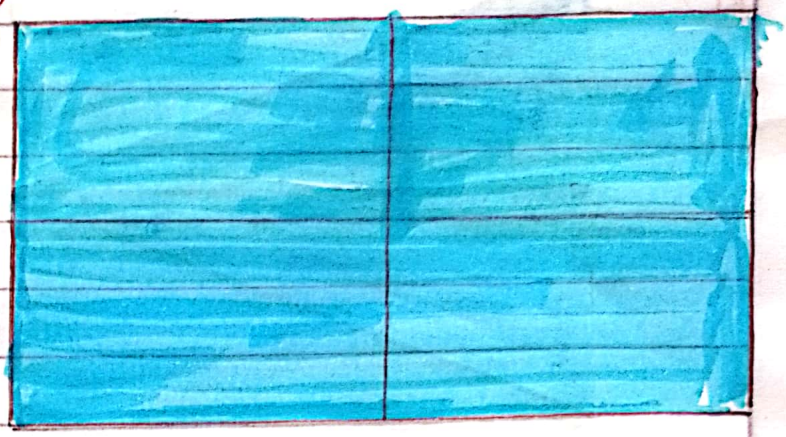
Escaneado con CamScanner

(d)



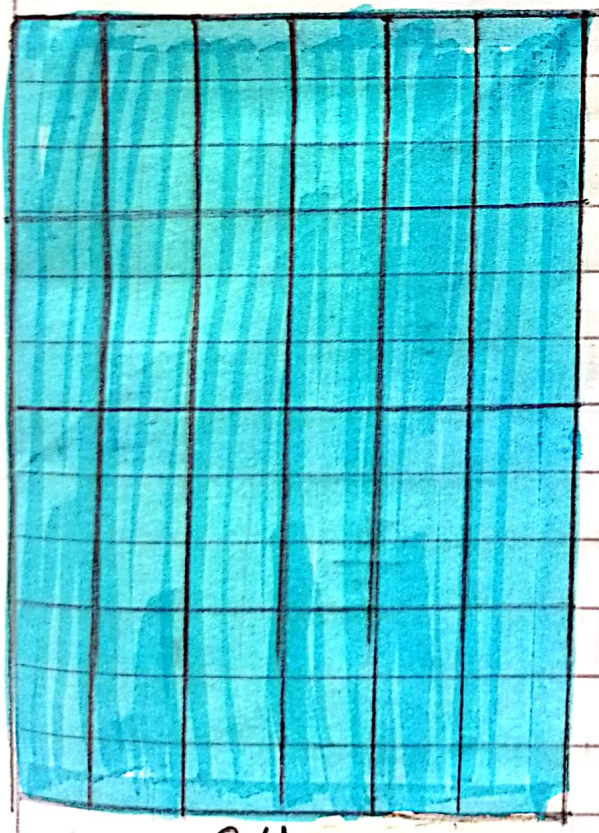
$\frac{4}{12}$

(f)



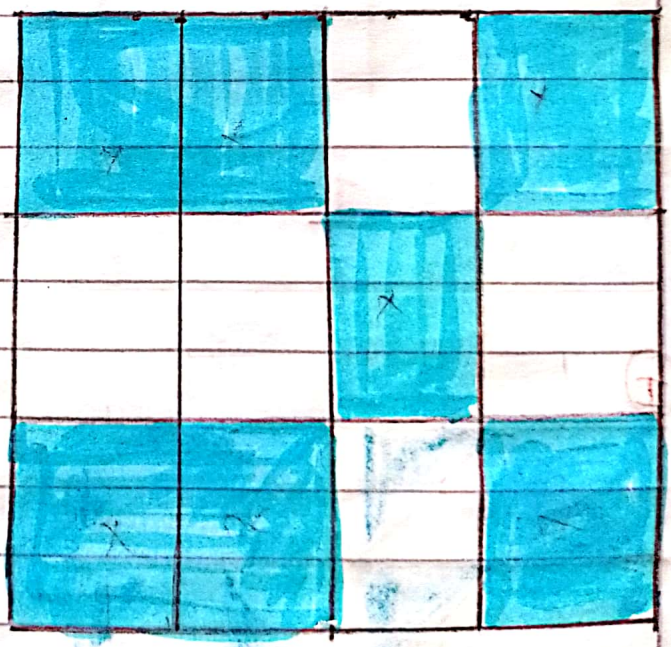
$\frac{4}{4}$

(e)



$\frac{24}{24}$

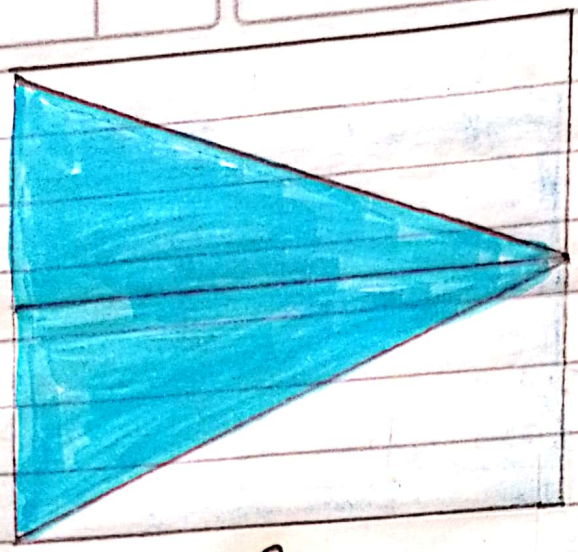
(g)



$\frac{7}{12}$

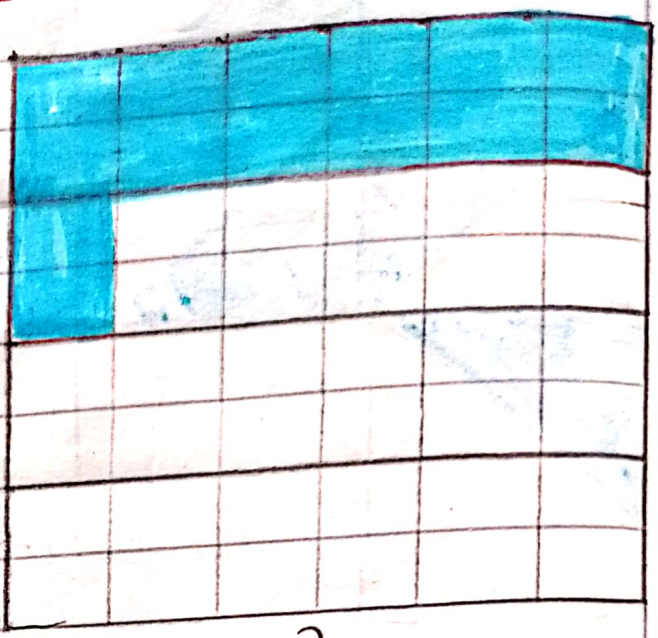
Escaneado con CamScanner

H



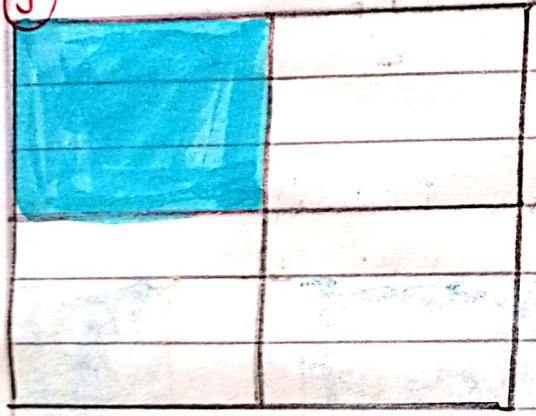
$\frac{2}{4}$

i



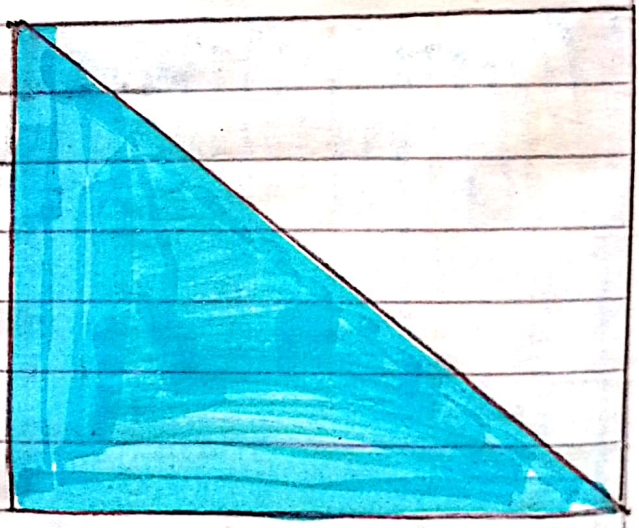
$\frac{7}{24}$

j



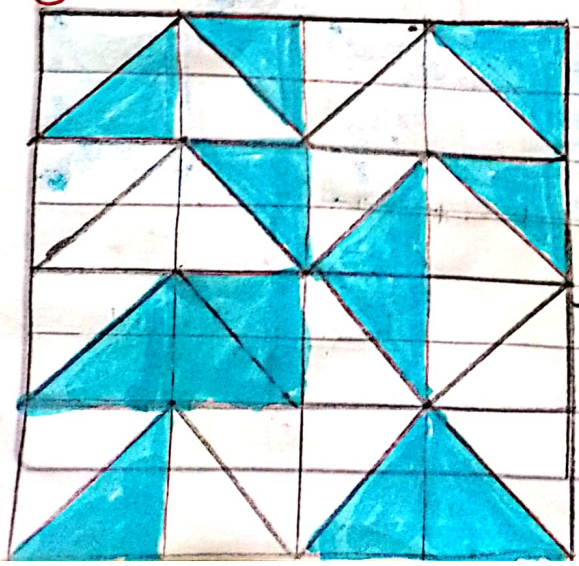
$\frac{1}{4}$

k



$\frac{1}{2}$

I



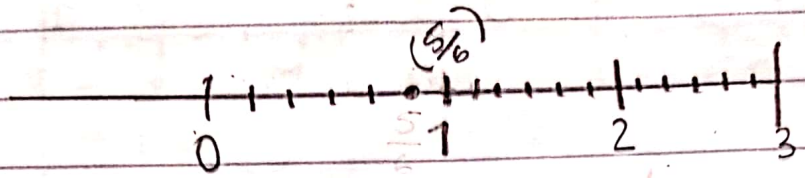
$\frac{13}{34}$

Escaneado con CamScanner

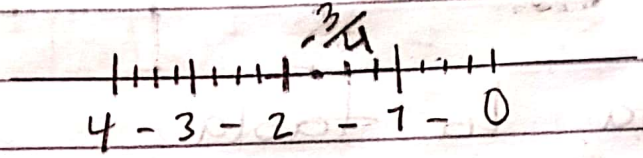
Practica 20

① Representa en la recta numerica cada uno de los siguientes racionales.

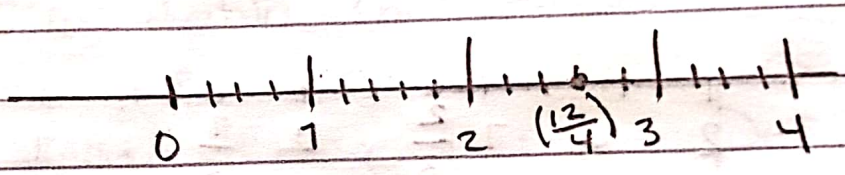
a $\frac{5}{6}$



b $-\frac{3}{4}$



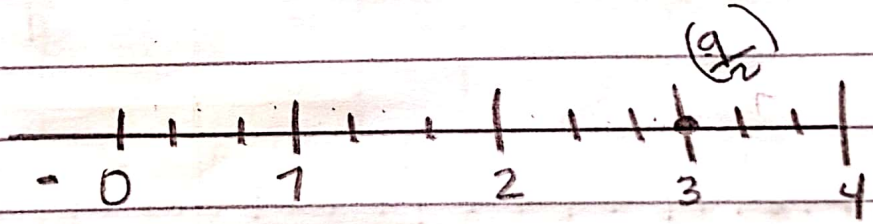
c $\frac{12}{4}$



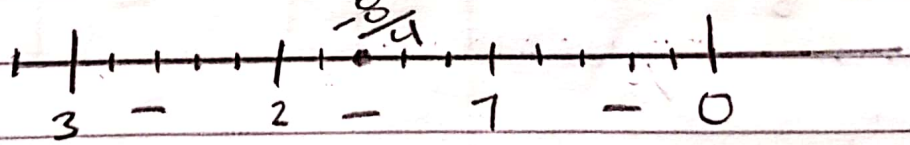
D $-\frac{17}{12}$



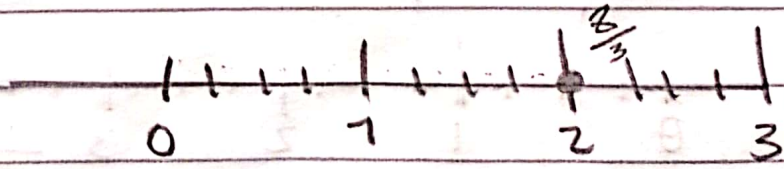
e $\frac{9}{2}$



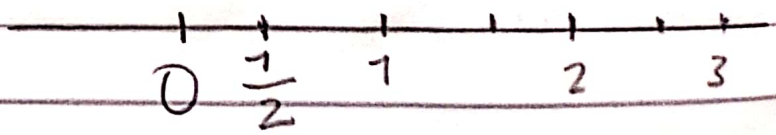
F $-\frac{8}{4}$



G $\frac{8}{3}$

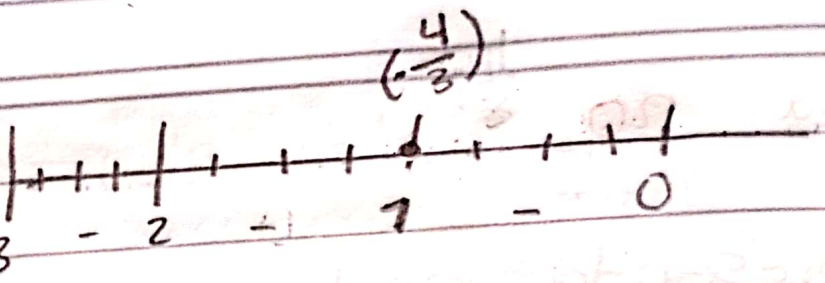


h $\frac{1}{2}$

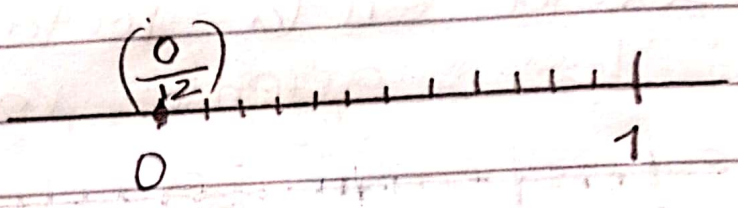


Escaneado con CamScanner

i) $-\frac{4}{3}$

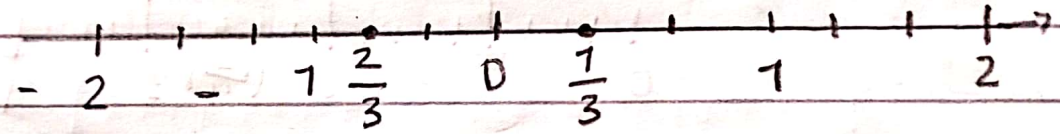


j) $\frac{0}{12}$

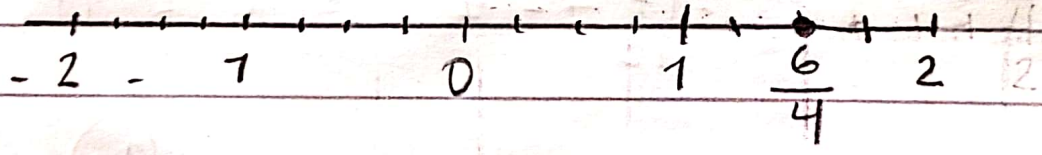


2)

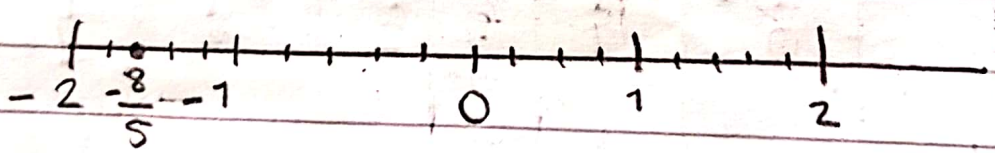
a)



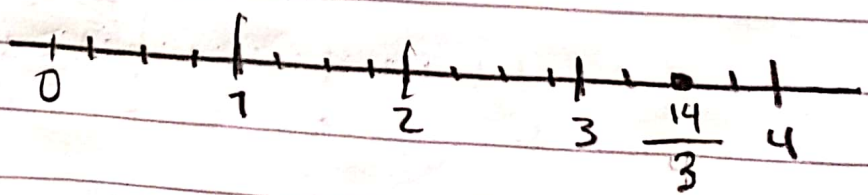
b)



c)

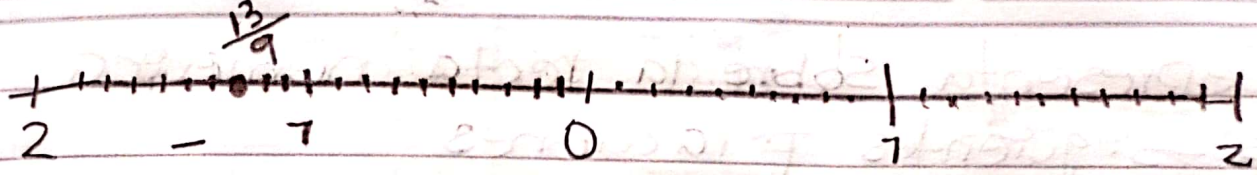


d)

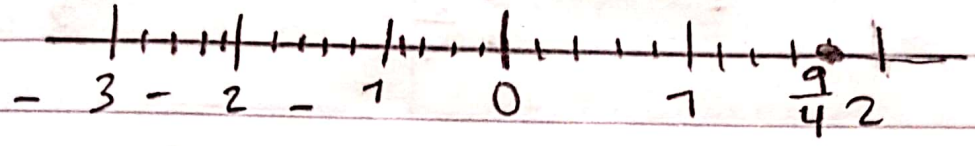


Escaneado con CamScanner

(e)



(f)



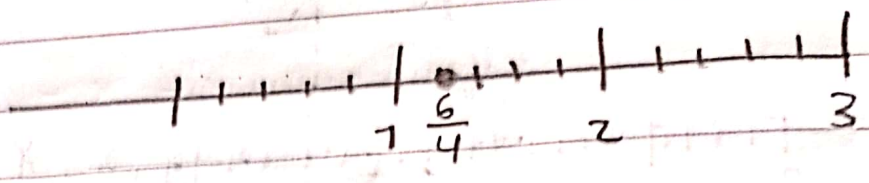
Integración cognitiva

(1) Completa la tabla indicando si el número dado es una racional o una fracción equivalente y si es positivo o negativo.

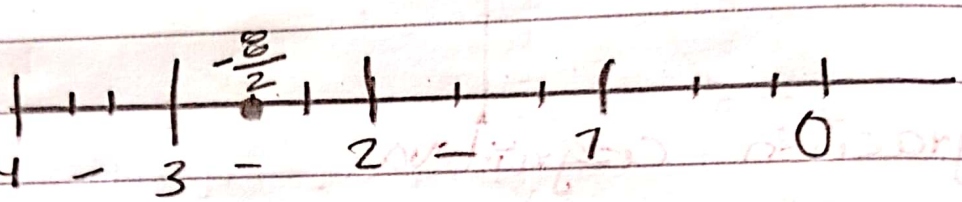
Fracción	$\frac{2}{7}$	$\frac{-9}{5}$	$\frac{-3}{4}$	$\frac{12}{-6}$
Racional / equivalente	$\mathbb{R}$	$\mathbb{R}$	$\mathbb{R}$	$\in$
+ / -	+	-	+	-

② Representa sobre la recta numerica las siguientes Fracciones

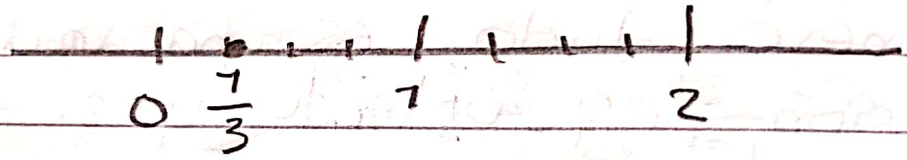
a $\frac{6}{4}$



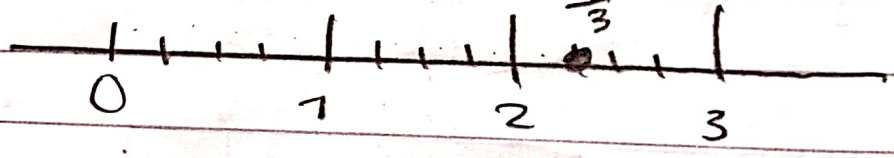
b $\frac{-8}{2}$



c $\frac{1}{3}$



D $\frac{9}{3}$

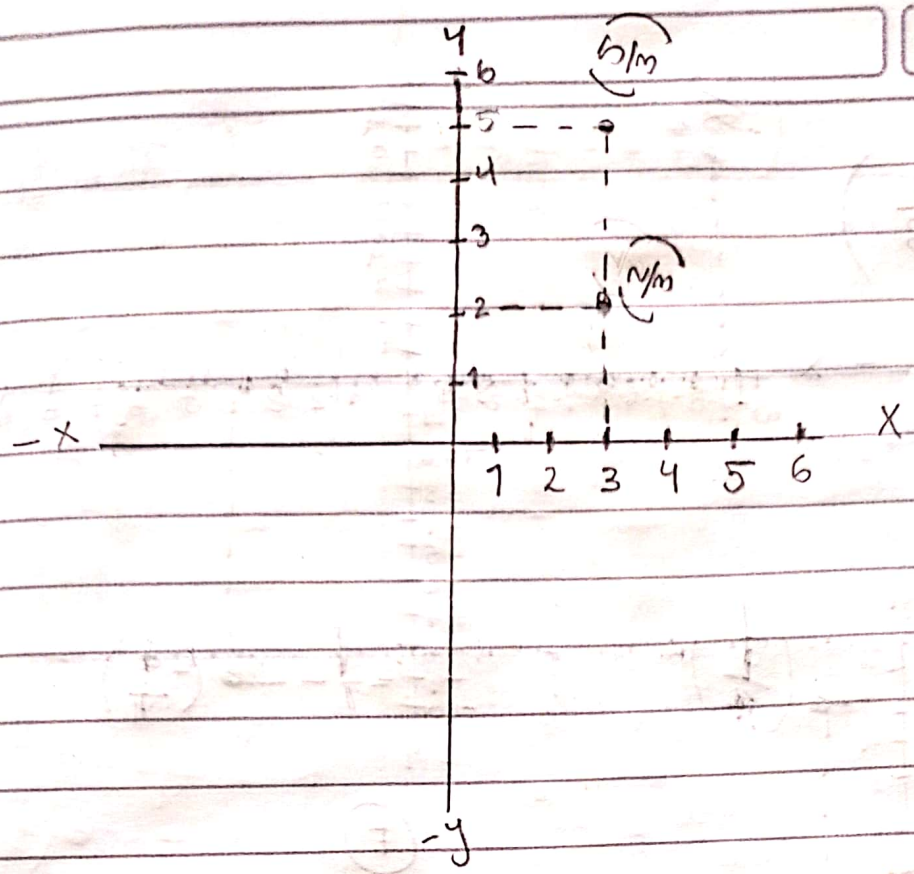


Practica 21

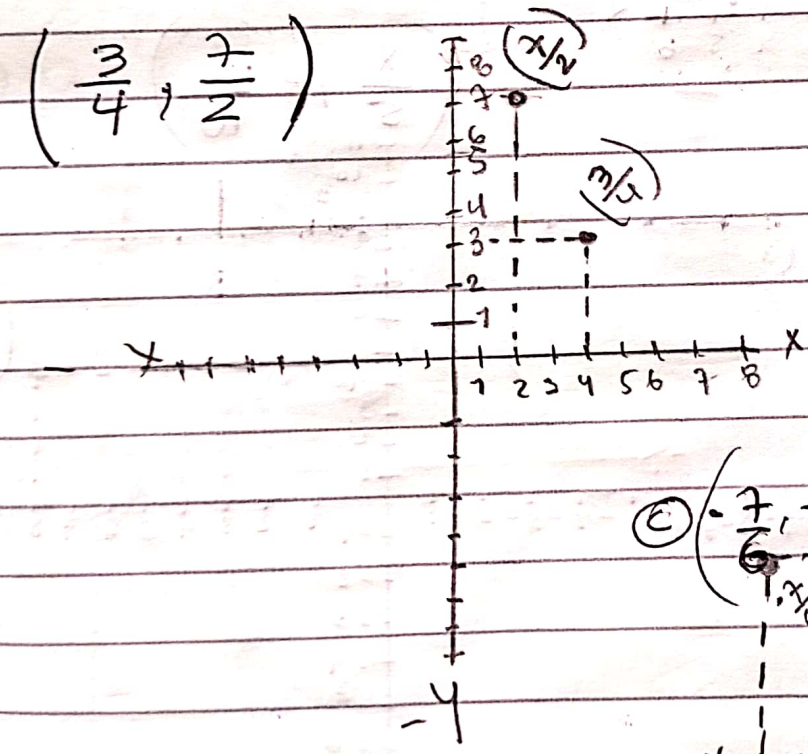
Representa en el plano cartesiano los siguientes puntos.

ⓐ $\left(\frac{2}{3}, \frac{5}{3}\right)$

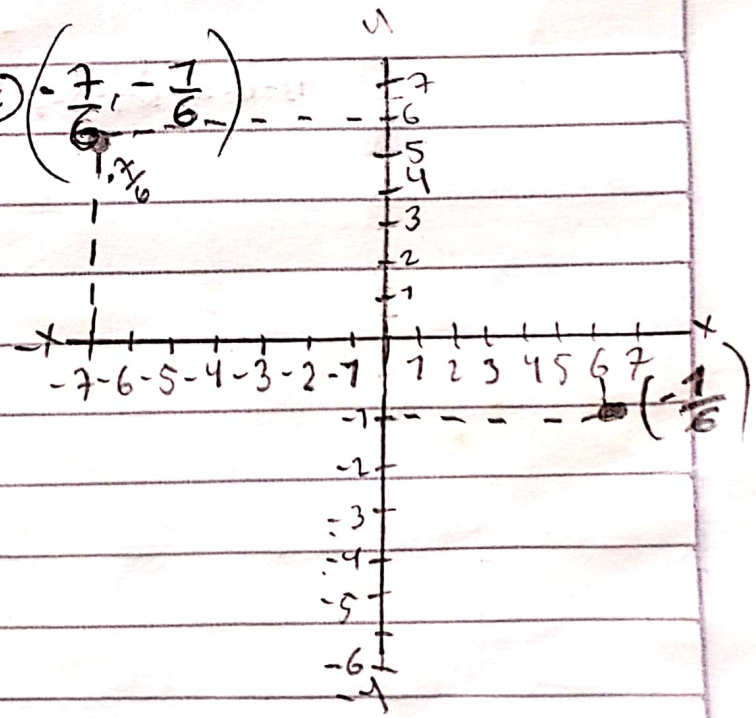
Escaneado con CamScanner



(b) $\left(\frac{3}{4}, \frac{7}{2}\right)$

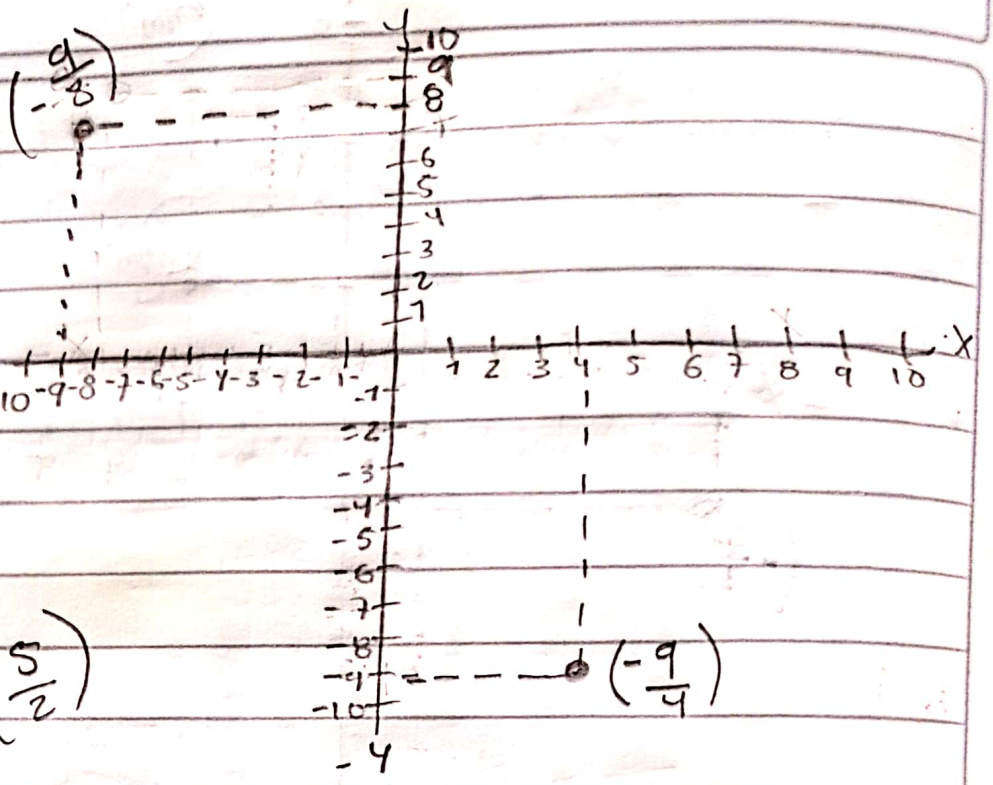


(c) $\left(-\frac{7}{6}, -\frac{7}{6}\right)$

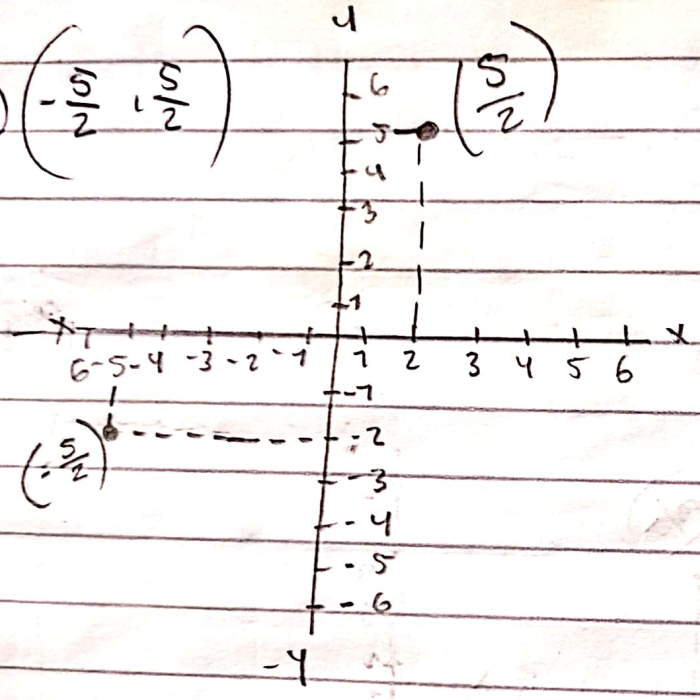


Escaneado con CamScanner

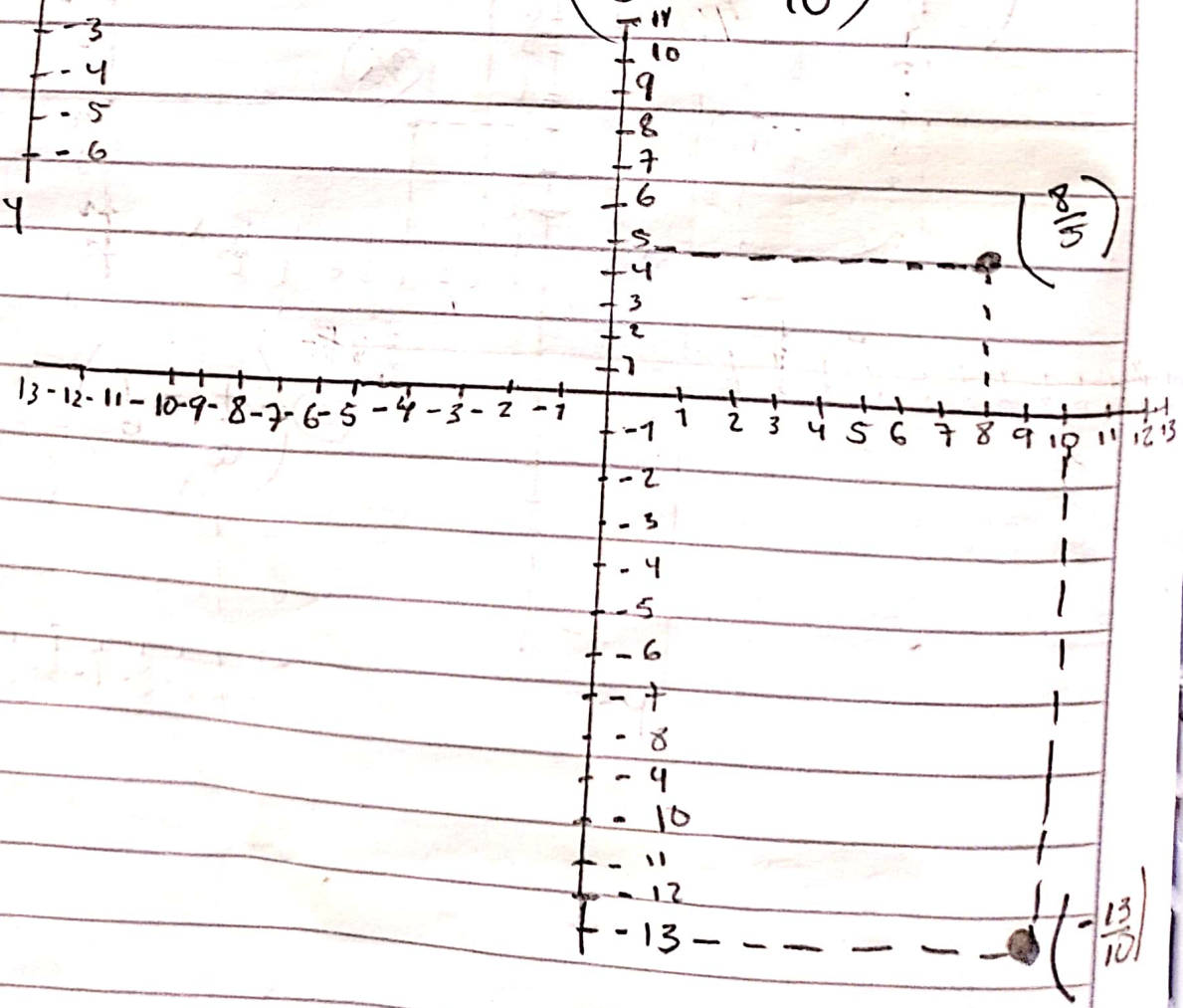
(d) $\left(-\frac{9}{4}, -\frac{9}{8}\right)$



(e) $\left(-\frac{5}{2}, \frac{5}{2}\right)$

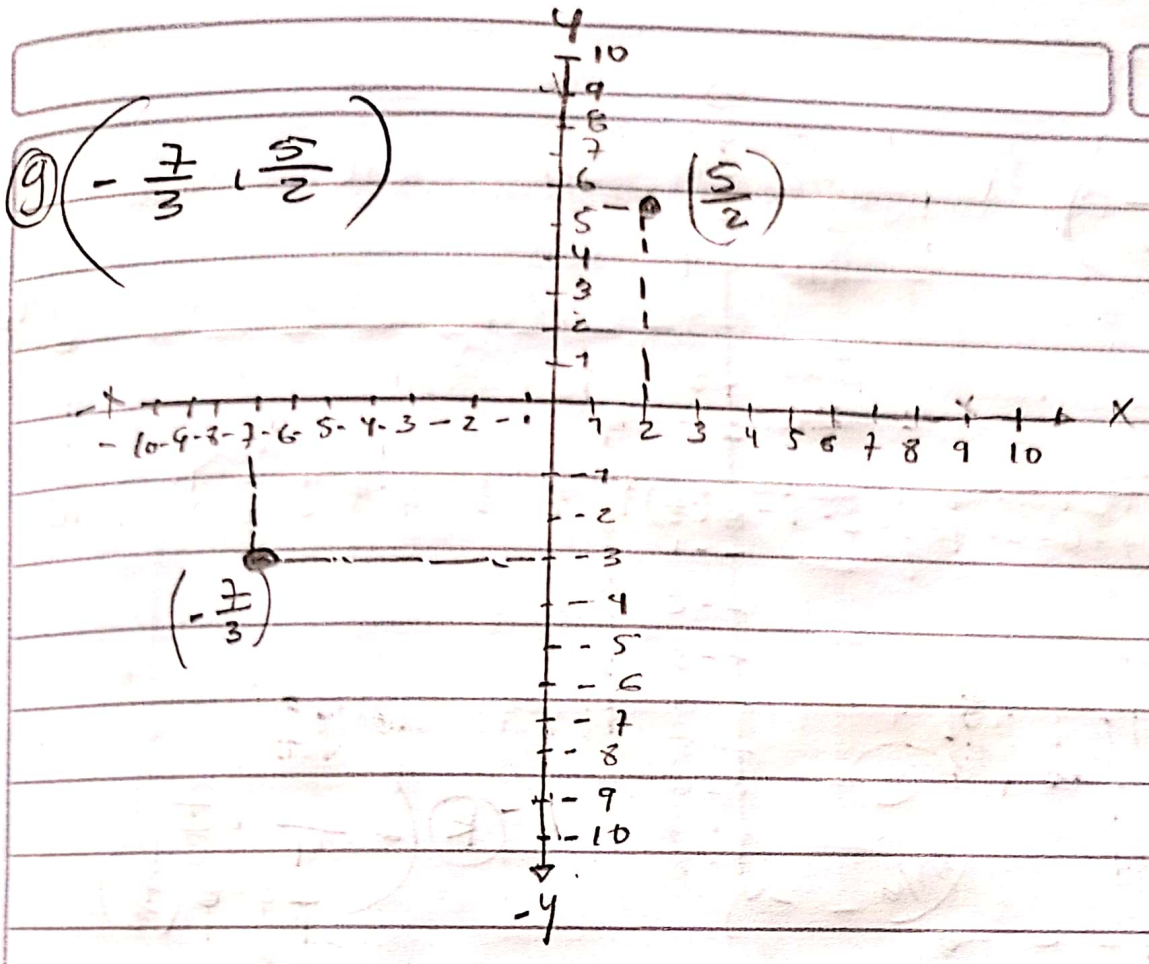


(F) $\left(\frac{8}{5}, -\frac{13}{10}\right)$

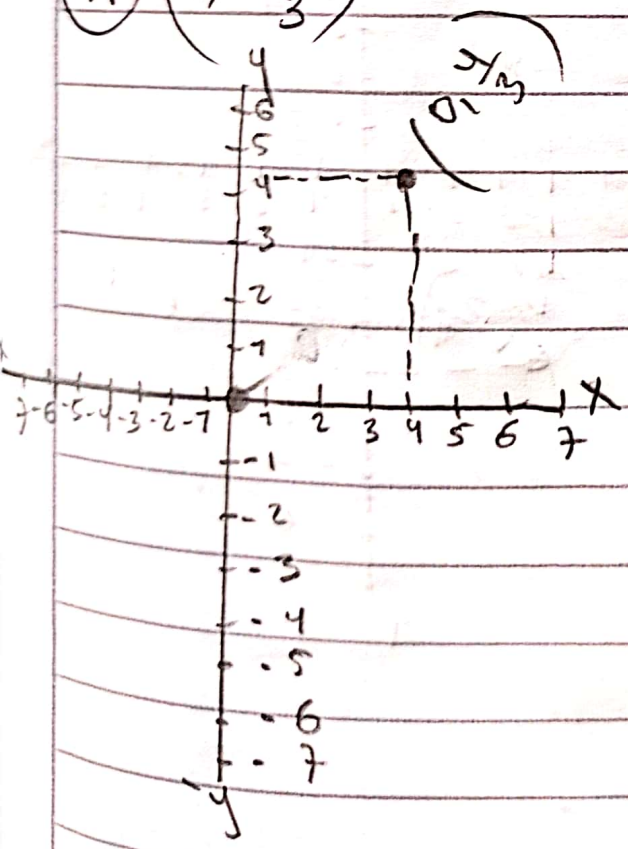


Escaneado con CamScanner

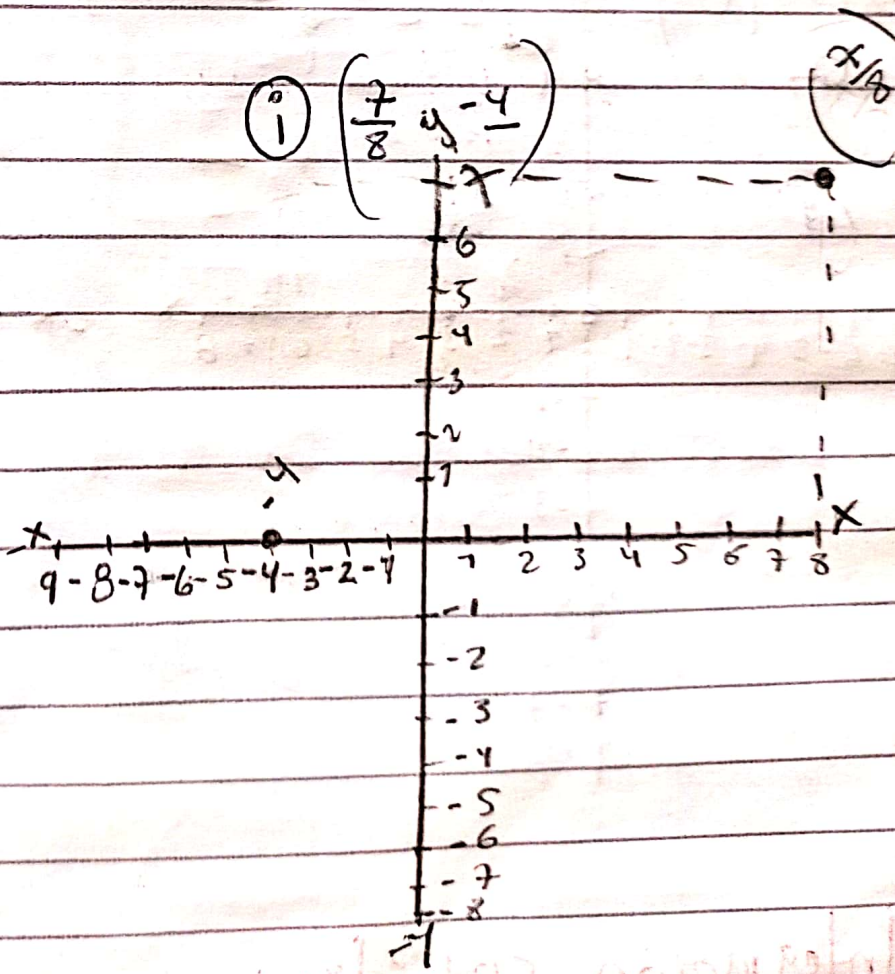
⑨ $\left(-\frac{7}{3}, \frac{5}{2}\right)$



⑩ $\left(0, \frac{4}{3}\right)$

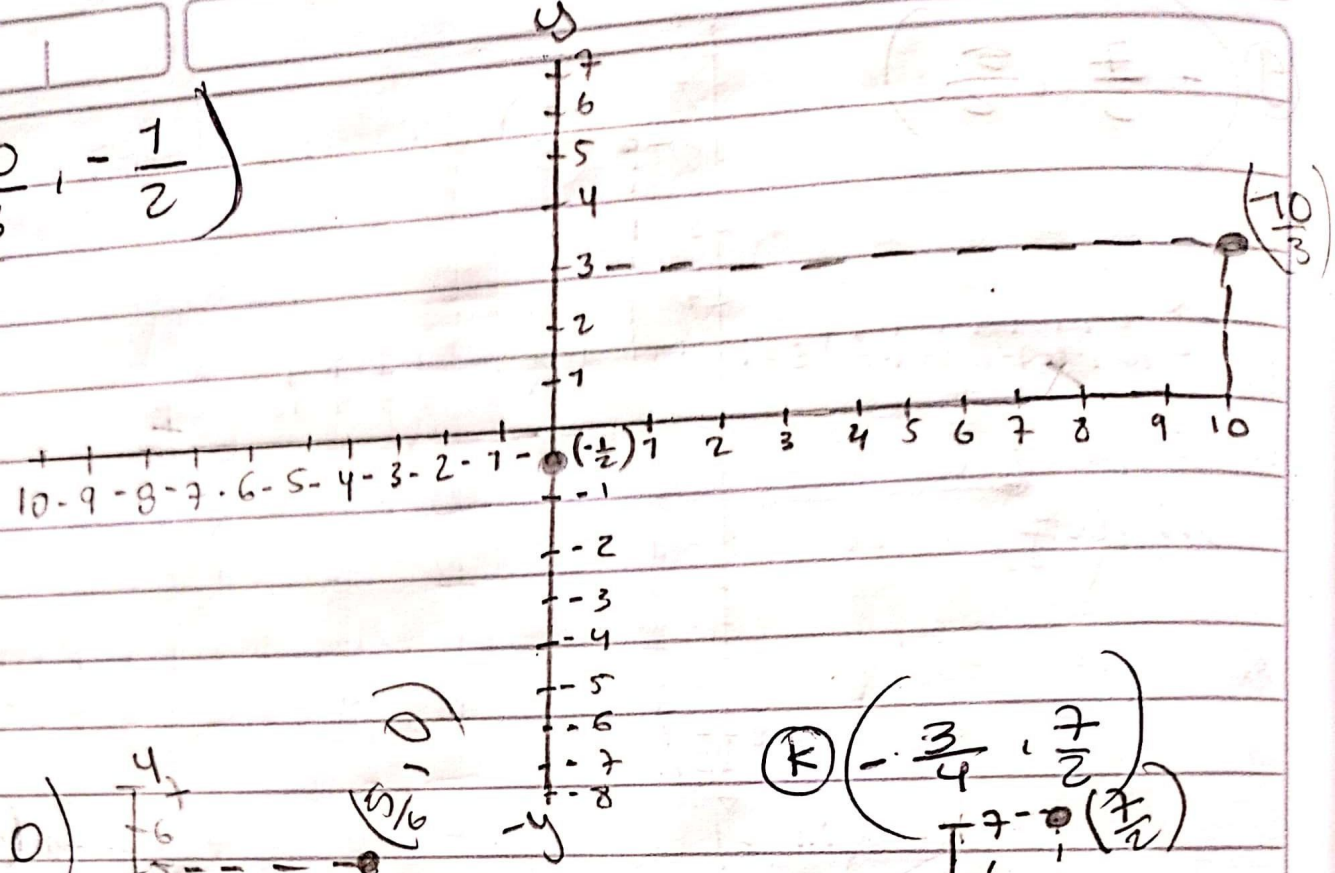


⑪ $\left(\frac{7}{8}, -\frac{4}{1}\right)$

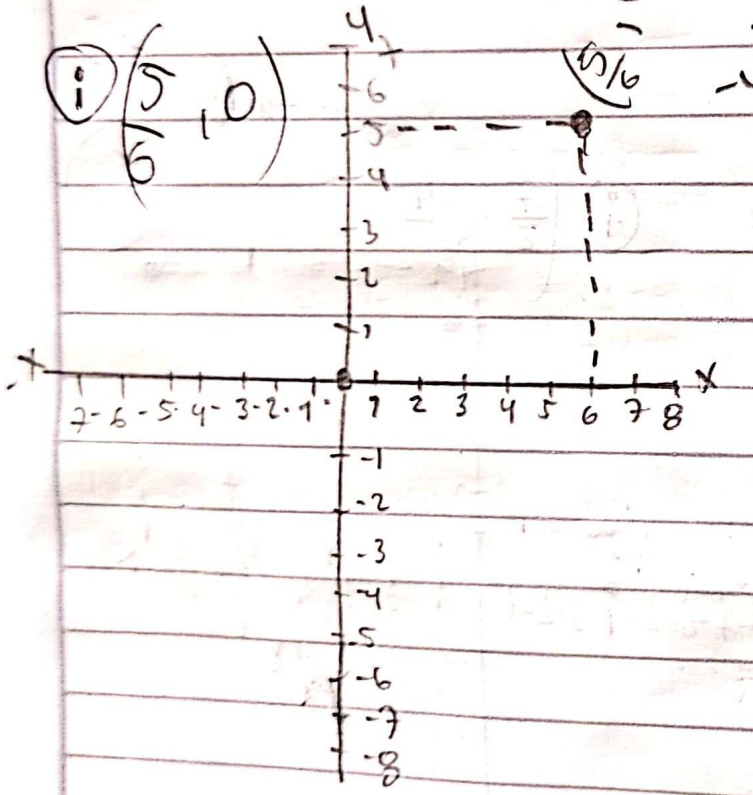


Escaneado con CamScanner

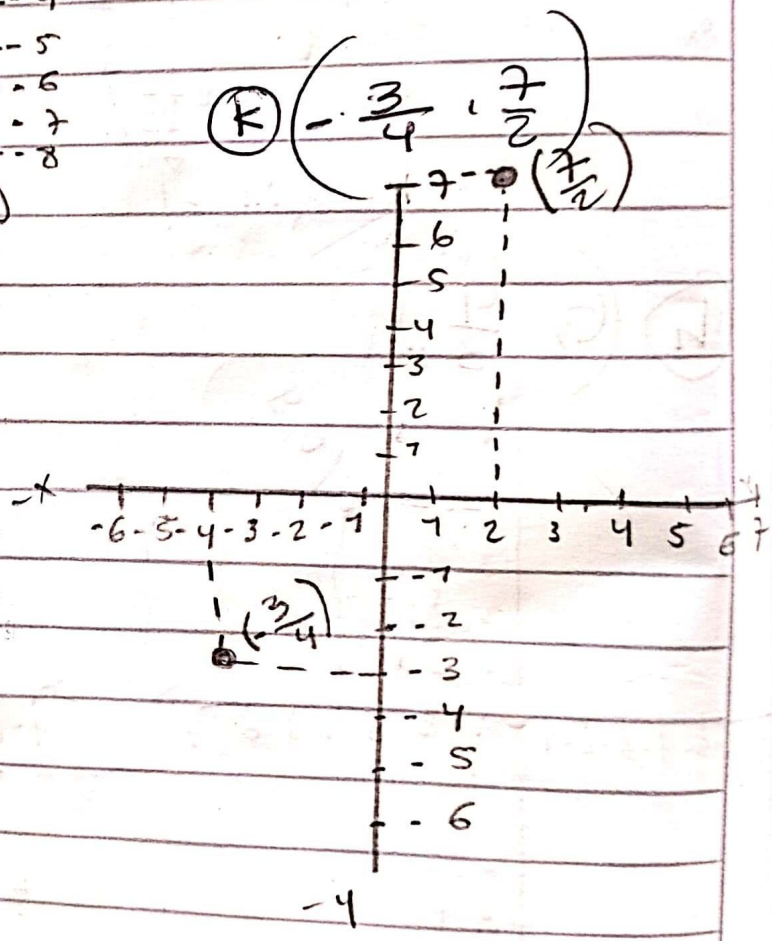
(j) $\left(\frac{10}{3}, -\frac{1}{2}\right)$



(i) $\left(\frac{5}{6}, 0\right)$



(k) $\left(-\frac{3}{4}, \frac{7}{2}\right)$



Integración cognitiva

(1) (a) la fracción $\frac{-2}{5}$ es negativa. = Falso

(b) $\frac{12}{15}$ es un número racional = Verdadero

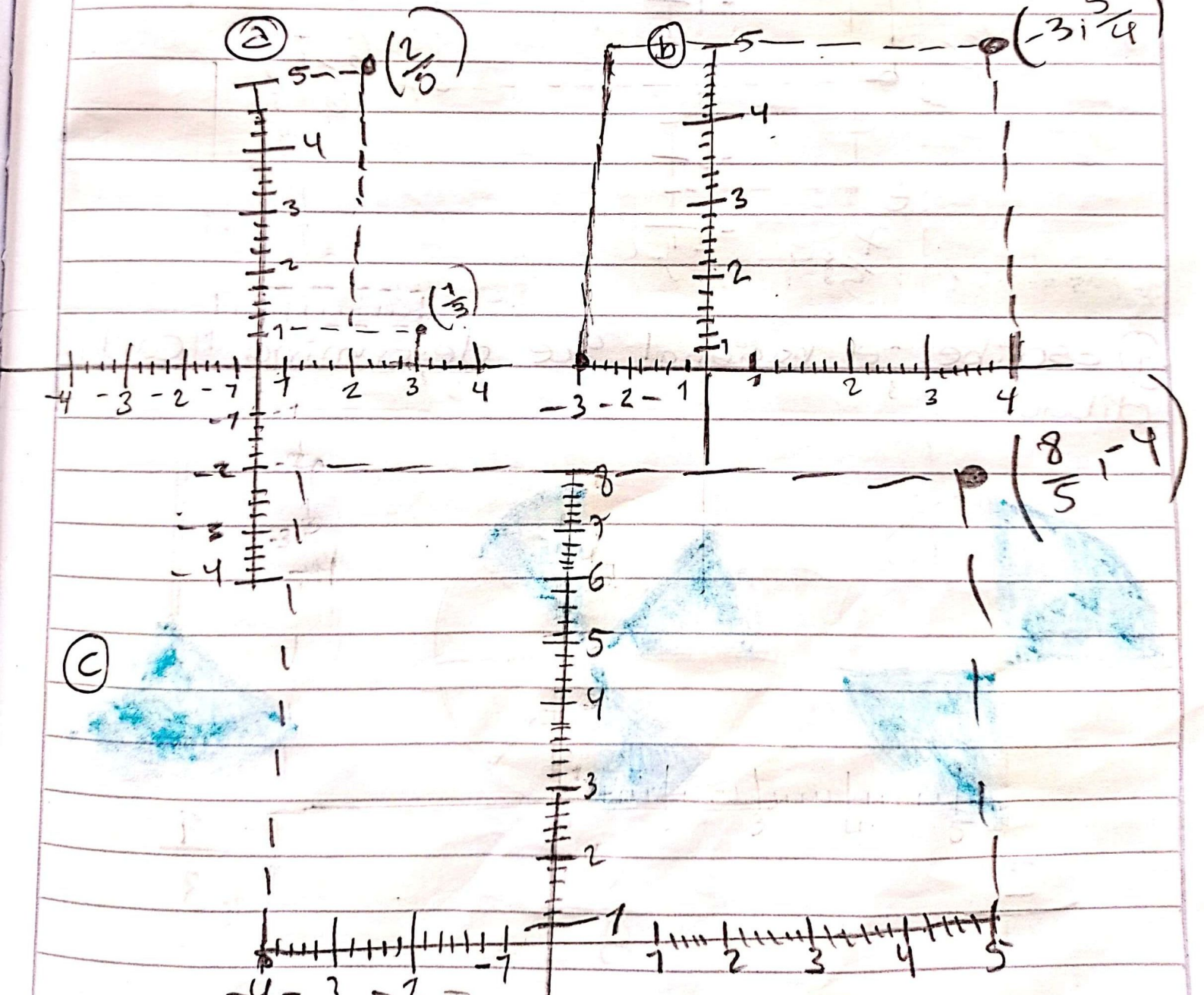
Escaneado con CamScanner

© $\frac{9}{-12}$ es un equivalente al racional $\frac{3}{4}$ = V

(d) $\frac{-3}{-4}$ está ubicado a la izquierda de cero V

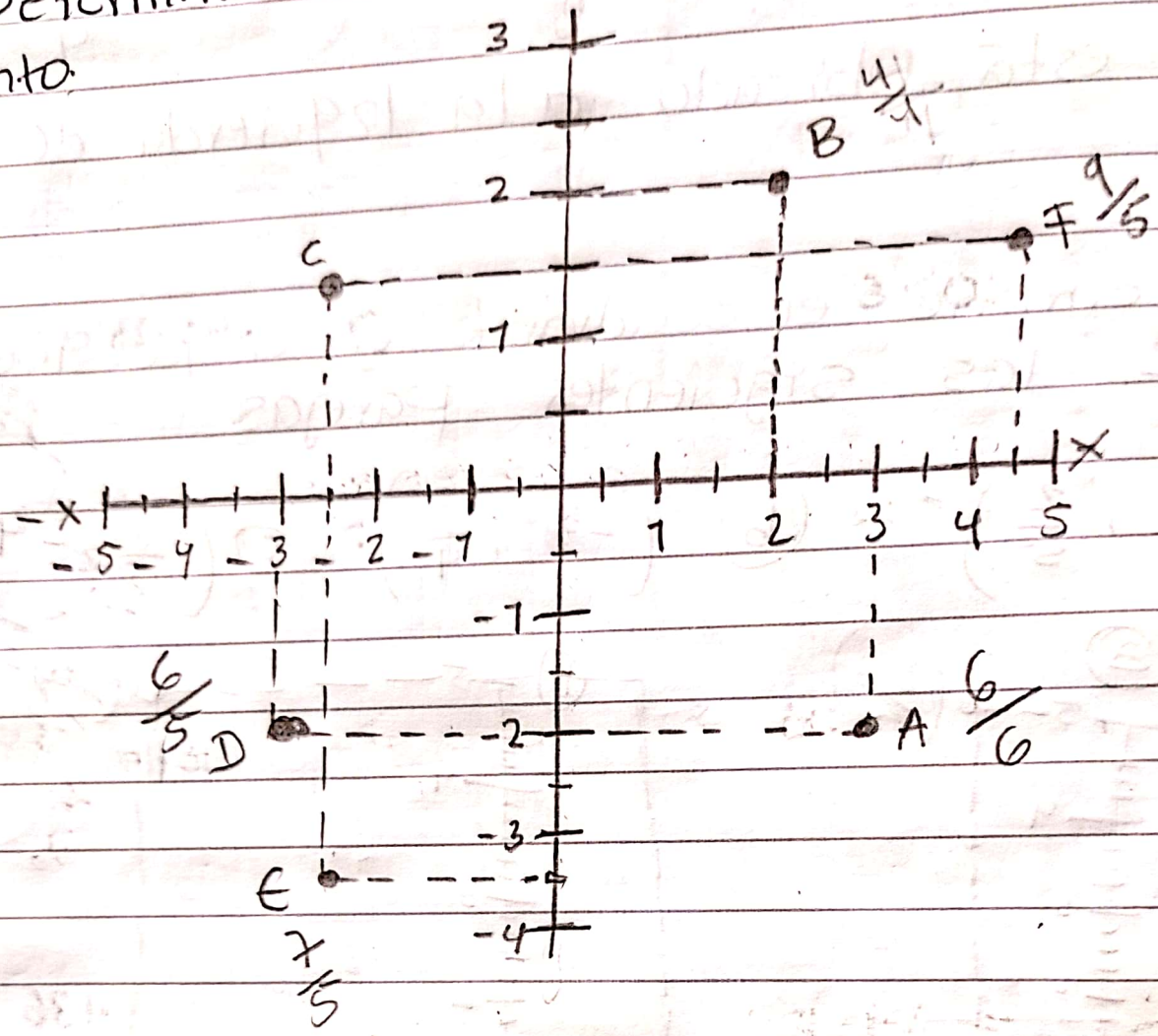
(2) Determine el cuadrante en el que quedan ubicados las siguientes parejas.

(a) $\left(\frac{1}{3}, \frac{2}{5}\right)$ (b) $\left(-3, \frac{5}{4}\right)$ © $\left(\frac{8}{5}, -4\right)$

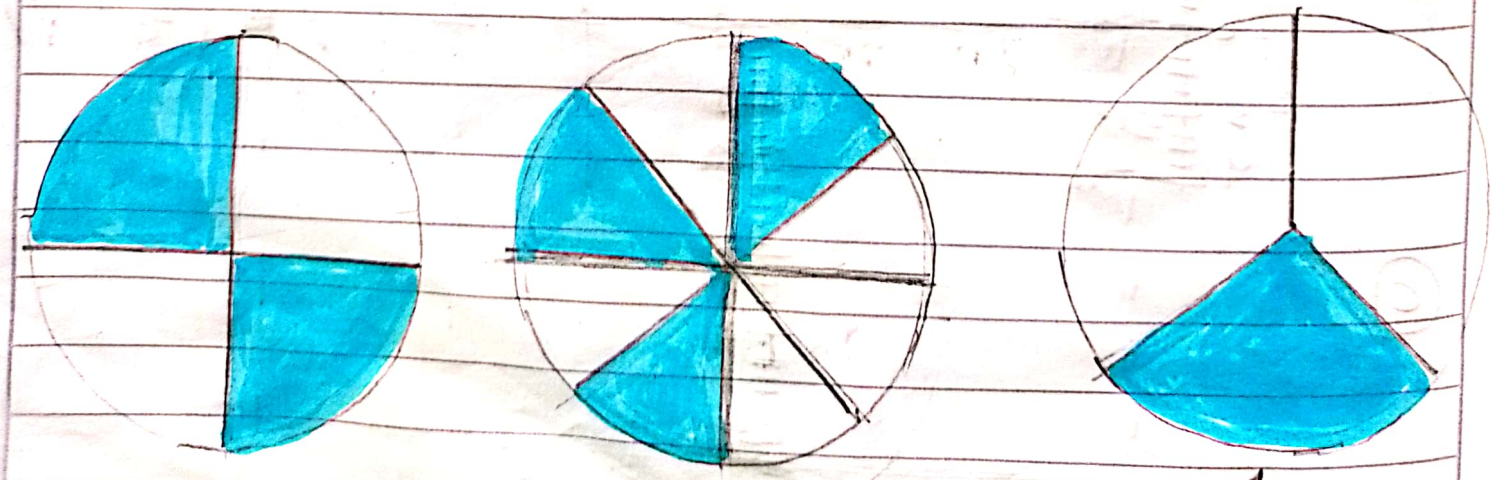


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(3) Determina la pareja que corresponde a cada punto.



(4) Escribe el racional que determina cada dibujo.



$\frac{2}{4}$ $\frac{3}{8}$ $\frac{1}{3}$

Escaneado con CamScanner

Práctica 22

① Relaciona cada par de Fracciones con los signos =, > o < según corresponda

ⓐ $\frac{2}{3} > \frac{2}{5}$ $10>6$

ⓑ $\frac{3}{7} < \frac{6}{7}$ $21<42$

ⓒ $-\frac{4}{7} > -\frac{4}{15} = 105\ 28$

ⓓ $-\frac{7}{9} = \frac{63}{81}$ $-\frac{567}{567} = \frac{7}{7}$

ⓔ $-\frac{8}{17} \geq \frac{9}{13} = 104\ 99$

ⓕ $\frac{4}{17} < \frac{9}{31} = 124\ 153$

ⓖ $-\frac{8}{25} \geq \frac{4}{17} = -136\ 100$

ⓗ $\frac{4}{4} < -\frac{7}{5} = 20 < 28$

ⓘ $-\frac{9}{7} > -\frac{11}{6} = 54\ 77$

ⓙ $\frac{5}{8} = \frac{10}{16} = 80 = 80$

ⓚ $-\frac{17}{11} = -\frac{85}{55}$ $935 = 935$

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② Ordena de menor a mayor los siguientes números racionales.

ⓐ $\frac{4}{5}, -\frac{2}{3}, \frac{7}{2}, -\frac{9}{10}$

ⓑ $-\frac{7}{12}, -\frac{9}{4}, -\frac{13}{5}, -\frac{11}{2}$

2	3	5	10	2
1	3	5	5	3
	1	5	5	5
		1	1	

30

2	4	5	12	2
1	2	5	6	2
	1	5	3	5
		1	1	3

60

$\frac{4}{5}, -\frac{2}{3}, \frac{7}{2}, -\frac{9}{10}$

$-\frac{35}{60} - \frac{135}{60} - \frac{156}{60} - \frac{330}{60}$

$\frac{24}{30} - \frac{20}{30}, \frac{105}{30}, -\frac{27}{30}$

$-\frac{7}{12} > -\frac{9}{4} > -\frac{13}{5} > -\frac{11}{2}$

$-\frac{2}{3} > \frac{4}{5} > -> \frac{9}{10} > \frac{7}{2}$.

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(c) $-\frac{7}{3}, \frac{7}{4}, -\frac{9}{2} < -\frac{11}{6}$

2	3	4	6	2
4	3	2	3	2
	3	1	3	3
	1		1	

$\rightarrow 12$

$-\frac{4}{12} \cdot \frac{21}{12} - \frac{54}{12} - \frac{22}{12}$

$-\frac{1}{3} > \frac{7}{4} > -\frac{11}{6} - \frac{9}{2}$

$-\frac{1}{3} > \frac{7}{4} > -\frac{11}{16} > -\frac{9}{2}$

(d) $\frac{5}{2} - \frac{7}{3} \quad \frac{4}{9} - \frac{5}{6}$

2	3	6	9	2
1	3	3	9	3
	1	1	3	3
			1	

$\rightarrow 18$

$\frac{45}{18} - \frac{42}{18} \quad \frac{8}{18} - \frac{15}{18}$

$\frac{4}{9} > -\frac{5}{6} > -\frac{7}{3} > \frac{5}{2}$

(3) Ordena en forma descendente los siguientes racionales.

(a) $\frac{5}{3}, -\frac{5}{2}, \frac{5}{8} - \frac{5}{12}$

2	3	8	12	2
1	3	4	6	2
	1	2	3	2
		1	1	3

$\rightarrow 24$

$\frac{40}{24} - \frac{66}{24} \quad \frac{15}{24} - \frac{10}{24}$

$-\frac{5}{2} < \frac{5}{3} < \frac{5}{8} < -\frac{5}{12}$

(b) $-\frac{12}{5} \quad \frac{17}{9} \quad \frac{28}{15} - \frac{16}{3}$

3	5	9	15	3
1	5	3	5	5
	1	1	1	3

$\rightarrow 45$

$\frac{-108}{45} \quad \frac{85}{45} \quad \frac{84}{45} - \frac{240}{45}$

$-\frac{16}{3} < -\frac{12}{5} < \frac{17}{9} < \frac{28}{15}$

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© $-\frac{3}{4}, \frac{5}{2}, -\frac{3}{8}, \frac{11}{6}$

2 4 6 8 | 2
1 2 3 4 | 2
1 3 2 | 2
1 1 | 3

12

$-\frac{9}{12} \quad \frac{30}{12} \quad -\frac{45}{12} \quad \frac{22}{12}$

$\frac{5}{2} < \frac{11}{6} < -\frac{3}{4} < -\frac{3}{8}$

(d) $\frac{7}{6}, -\frac{7}{2}, \frac{9}{4}, \frac{15}{8}$

2 4 6 8 | 2
1 2 3 4 | 2
1 3 2 | 2
3 1 | 3
1

12

$\frac{14}{12} \quad -\frac{42}{12} \quad \frac{27}{12} \quad \frac{22.5}{12}$

$-\frac{7}{2} < \frac{9}{4} < \frac{15}{8} < \frac{7}{6}$

(e) $\frac{7}{4}, \frac{19}{12}, \frac{13}{9}, \frac{22}{23}$

$\frac{1.449}{828}, \frac{1311}{828}, \frac{1.196}{828}, \frac{792}{828}$

$\frac{7}{4}, \frac{19}{12}, \frac{13}{9}, \frac{22}{23}$

(f) $-\frac{11}{8}, -\frac{17}{4}, -\frac{23}{2}, -\frac{3}{16}$

2 4 8 16 | 2
1 2 4 8 | 2
1 2 4 | 2
1 2 | 2

16

$\frac{22}{16} \quad -\frac{68}{16} \quad -\frac{184}{16} \quad -\frac{31}{16}$

$-\frac{23}{2} \quad -\frac{17}{4} \quad -\frac{31}{16} \quad -\frac{11}{8}$

Escaneado con CamScanner

(g) $\frac{7}{10} - \frac{8}{5} - \frac{3}{2} - \frac{7}{3}$

2	3	5	10	2
1	3	5	5	3
	1	1	1	5

$\} 30$

$\frac{21}{30} - \frac{48}{30} - \frac{45}{30} - \frac{70}{30}$

$-\frac{7}{3} < -\frac{8}{5} < -\frac{3}{2} < -\frac{7}{10}$

(h) $-\frac{9}{20} - \frac{7}{4} - \frac{9}{5} - \frac{21}{2}$

2	4	5	20	2
1	2	5	10	2
	1	5	5	5
		1	1	

$\} 20$

$\frac{9}{20} - \frac{35}{20} - \frac{36}{20} - \frac{210}{20}$

$-\frac{21}{2} < -\frac{9}{5} < -\frac{7}{4} < -\frac{9}{20}$

Práctica 23

(a) $\frac{3}{7} + \frac{5}{7} + \frac{6}{7}$

$= \frac{3+5+6}{7} = \frac{14}{7}$

(c) $\frac{9}{4} + \frac{5}{4} + \left(-\frac{7}{4}\right)$

$\frac{9+5+(-7)}{4} = -\frac{7}{4}$

(b) $\frac{3}{5} + \left(-\frac{2}{5}\right) + \frac{4}{5}$

$= \frac{3+(-2)+4}{5} = \frac{-5}{5}$

(d) $-\frac{2}{9} + \left(-\frac{4}{9}\right) + -\left(-\frac{5}{9}\right)$

$\frac{-2+(-4)+(-5)}{9} = -\frac{11}{9}$

Escaneado con CamScanner

(e) $\frac{7}{9} + \frac{5}{18} + \frac{2}{3}$

3 9 18 | 3
1 3 6 | 2
1 2 | 2

$\rightarrow 18$

$\frac{7}{9} + \frac{5}{18} + \frac{2}{3}$

$= \frac{7+5+2}{18} = \frac{14}{18}$

(f) $-\frac{1}{7} + \frac{3}{4} + \frac{5}{14}$

$= \frac{-1+3+5}{28} = \frac{7}{28}$

4 7 14 | 2
2 7 7 | 2
1 7 7 | 7
1 1 1

$\rightarrow 28$

(g) $\frac{2}{9} + \left(-\frac{1}{12}\right) + \frac{5}{18}$

$= \frac{2+(-1)+5}{36} = \frac{6}{36}$

9 12 18 | 2
9 6 9 | 2
9 3 9 | 3
3 3 3 | 3
1 1 1

$\rightarrow 36$

(h) $-\frac{3}{13} + \left(\frac{-15}{26}\right) + \frac{17}{65}$

$= \frac{-3+(-15)+17}{130} = \frac{1}{130}$

13 26 65 | 2
13 13 65 | 5
13 13 13 | 13
1 1 1

$\rightarrow 130$

Escaneado con CamScanner

Práctica 24

① Halla la diferencia entre las siguientes fracciones.

ⓐ $\frac{6}{5} - \frac{9}{5}$

$= \frac{6-9}{5} = \frac{-3}{5} = \frac{-1}{1}$

ⓑ $\left(-\frac{3}{4}\right) - \left(-\frac{7}{4}\right)$

$= \frac{-3+(-7)}{4} = \frac{10}{4}$

ⓒ $\frac{3}{2} - \left(-\frac{1}{2}\right)$

$= \frac{+3+(-1)}{2} = \frac{-4}{2}$

ⓓ $\left(\frac{5}{6}\right) - \left(\frac{-9}{8}\right)$

6	8	2
3	4	3
1	2	2
	1	2

$\rangle 24$

$\frac{+20+(-27)}{24} = -\frac{7}{4}$

ⓔ $\left(\frac{1}{4}\right) - \left(-\frac{2}{3}\right)$

3	4	3
1	2	2
	1	2

$\rangle 12$

$\frac{12+(-8)}{12} = \frac{4}{12}$

Ⓕ $\frac{7}{8} - \left(\frac{11}{6}\right)$

6	8	2
3	4	3
1	4	2
	2	2
	1	

$\rangle 24$

$\frac{21+44}{24} = \frac{65}{24}$

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g) $\frac{5}{12} - \left(-\frac{9}{8}\right)$

$\frac{10 + 27}{24} = \frac{37}{24}$

25

2) Resuelvo los siguientes productos con más de dos factores

a) $\left(\frac{3}{2}\right)\left(\frac{2}{3}\right)\left(\frac{4}{5}\right) = \frac{\overset{1}{\cancel{3}}\ \overset{1}{\cancel{2}}\ \overset{2}{\cancel{4}}}{\underset{1}{\cancel{2}}\ \underset{1}{\cancel{3}}\ \underset{1}{\cancel{5}}} = \frac{1 \times 1 \times 2}{1 \times 1 \times 1} = \frac{2}{1}$

b) $\left(\frac{10}{21}\right)\left(\frac{28}{15}\right)\left(\frac{6}{5}\right)$

$\frac{\overset{5}{\cancel{10}} \cdot \overset{4}{\cancel{28}} \cdot \overset{3}{\cancel{6}}}{\underset{7}{\cancel{21}} \cdot \underset{3}{\cancel{15}} \cdot \underset{1}{\cancel{5}}} \quad \frac{5 \times 4 \times 3}{7 \times 3 \times 1} = \frac{60}{21} = \frac{5}{7}$

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© $\left(-\frac{7}{4}\right)\left(\frac{2}{14}\right)\left(\frac{3}{2}\right) = \frac{-7 \cdot 2 \cdot 3}{4 \cdot 14 \cdot 2} = \frac{1 \times 1 \times 1}{2 \times 7 \times 1} = -\frac{1}{14}$

(d) $\left(-\frac{10}{9}\right)\left(\frac{15}{8}\right)\left(-\frac{16}{3}\right)$

$\frac{5 \quad 3 \quad 8}{\cancel{10} \cdot \cancel{15} \cdot \cancel{16}} = \frac{5 \times 3 \times 8}{3 \times 4 \times 1} = \frac{120}{12} = \frac{30}{3}$

$\cancel{9} \quad \cancel{8} \quad \cancel{3}$
$3 \quad 4 \quad 1$

30
60
120
12
6
3

(e) $\left(-\frac{3}{5}\right)\left(\frac{5}{6}\right)\left(-\frac{12}{5}\right)$

$\frac{1 \quad 1 \quad 6}{\cancel{3} \cdot \cancel{5} \cdot \cancel{12}} = \frac{1 \times 1 \times 6}{1 \times 3 \times 1} = \frac{6}{3}$

$\cancel{5} \cdot \cancel{6} \quad \cancel{5}$
$1 \quad 3 \quad 1$

(F) $\left(-\frac{4}{9}\right)\left(-\frac{27}{16}\right)\left(-\frac{2}{3}\right)$

$\frac{2 \quad 9 \quad 1}{\cancel{4} \cdot \cancel{27} \cdot \cancel{2}} = \frac{2 \times 9 \times 1}{3 \times 8 \times 1} = \frac{18}{24} = \frac{3}{6}$

$\cancel{9} \cdot \cancel{16} \cdot \cancel{3}$
$3 \quad 8 \quad 1$

3
9
18
24
12
6

Escaneado con CamScanner

Práctica 27

① Simplifica las siguientes fracciones

ⓐ $\dfrac{\frac{7}{8}-\frac{5}{6}+\frac{4}{9}}{\frac{9}{2}-\frac{7}{4}+\frac{8}{3}}$ =

6	8	9	2
3	4	9	2
3	2	9	2
3	1	9	3
1		3	3
		3	

$2 \times 2 \times 2 \times 3 \times 3 = 72$

$$\frac{\frac{63}{72}-\frac{60}{72}+\frac{32}{72}}{\frac{54}{12}-\frac{21}{12}+\frac{32}{12}} = \frac{\frac{35}{72}}{\frac{65}{12}} = \frac{420}{4680} = \frac{7}{78}$$

ⓑ $\dfrac{\frac{5}{2}-\frac{2}{4}+\frac{1}{6}}{\frac{3}{5}+\frac{2}{7}-3}$ $= \dfrac{\frac{5}{6}-\frac{16}{6}}{\frac{2}{4}+\frac{3}{4}} = \dfrac{\frac{5-16}{6}}{\frac{2+3}{4}} = \dfrac{\frac{-11}{6}}{\frac{5}{4}}$

$$= \frac{44}{30} = \frac{22}{15}$$

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c) $\dfrac{1+\frac{2}{3}-\frac{10}{3}}{-6\,\frac{4}{5}+\frac{1}{2}} = \dfrac{\frac{1}{1}-\frac{8}{3}}{\frac{6}{1}+\frac{5}{8}} = \dfrac{\frac{3}{8}}{\frac{1}{8}} = \dfrac{3}{8}\cdot\dfrac{8}{1} = \dfrac{24}{8} = \dfrac{3}{1}$

d) $\dfrac{\frac{5}{6}-3+\frac{2}{3}}{\frac{1}{5}\cdot\frac{5}{2}+1} = \dfrac{\frac{5}{6}\cdot\frac{3}{1}+\frac{2}{3}}{\frac{5}{10}+1} = \dfrac{\frac{5}{6}\cdot\frac{18}{6}+\frac{4}{6}}{\frac{5+10}{10}}$

$= \dfrac{\frac{9}{6}}{\frac{15}{10}} = \dfrac{90}{90} = -1$

e) $\dfrac{\frac{3}{8}\cdot\frac{4}{6}+1}{\frac{5}{3}+\frac{3}{5}+2}$

$\dfrac{\frac{12}{48}\cdot\frac{1}{1}}{\frac{8}{8}+\frac{2}{1}} = \dfrac{\frac{12+48}{48}}{\frac{8+16}{8}}$

$= \dfrac{\frac{60}{4}}{\frac{24}{8}} = \dfrac{408}{96} = \dfrac{17}{4}$

Día Mes Año

F $\dfrac{\frac{2}{7}\cdot\frac{14}{5}+\frac{3}{1}}{3-\frac{1}{4}\cdot\frac{4}{3}}$

$\dfrac{\frac{2}{7}\cdot\frac{14}{5}+\frac{3}{1}}{3\cdot\frac{1}{4}-\frac{4}{3}} = \dfrac{\frac{28}{35}+\frac{3}{1}}{\frac{3}{1}-\frac{4}{12}} =$

$\dfrac{\frac{28+105}{35}}{\frac{36-4}{12}} = \dfrac{\frac{133}{35}}{\frac{32}{12}} = \dfrac{1596}{1120} = \dfrac{57}{40}$

(9) $\dfrac{3+\frac{1}{2}\cdot\frac{4}{7}}{-1\frac{10}{3}\cdot\frac{3}{2}}$

$\dfrac{\frac{3}{1}+\frac{4}{14}}{\frac{1}{1}-\frac{30}{6}} = \dfrac{\frac{42+4}{14}}{\frac{6-30}{6}} = \dfrac{\frac{46}{14}}{\frac{24}{6}}$

$= \dfrac{46}{-336} = \dfrac{23}{-28}$

h $\dfrac{-\frac{3}{4}-\frac{1}{2}\cdot 2}{-\frac{5}{6}\cdot\frac{6}{3}+\frac{1}{2}}$

$= \dfrac{\frac{3}{4}-\frac{1}{7}}{\frac{30}{16}+\frac{1}{2}} \quad \dfrac{\frac{3}{4}-\frac{1}{1}}{\frac{15}{9}+\frac{1}{2}} = \dfrac{\frac{7}{4}}{\frac{7}{6}}$

$= \dfrac{42}{28} = \dfrac{3}{2}$

i $\dfrac{-10-\frac{1}{4}}{-10\cdot\frac{7}{5}-3}$

$= \dfrac{-\frac{40}{4}-\frac{1}{4}}{-\frac{70}{5}-\frac{15}{5}} = \dfrac{-\frac{41}{4}}{-\frac{85}{5}} =$

$= \dfrac{205}{340} = \dfrac{41}{68}$

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