

FRACTION REVIEWName: Key

Blk: \_\_\_\_\_

1. Calculate the following:

a.  $-6 \times \frac{1}{9} = -\frac{2}{3}$

b.  $7 \times \frac{2}{3} = 4\frac{2}{3}$

c.  $\frac{5}{6} \times 4 = 3\frac{1}{3}$

d.  $(\frac{-9}{10})(-6) = 5\frac{2}{5}$

e.  $(\frac{7}{8})(\frac{1}{14}) = \frac{1}{16}$

f.  $(\frac{9}{11})(-\frac{1}{5}) = -\frac{9}{55}$

g.  $(\frac{4}{5})(\frac{10}{11})(\frac{1}{16}) = \frac{1}{22}$

h.  $(-\frac{15}{16})(-\frac{2}{3})(-\frac{4}{5}) = -\frac{1}{2}$

i.  $(5\frac{1}{3})(2\frac{1}{4}) = 12$

j.  $(-6\frac{3}{4})(3\frac{1}{3}) = -\frac{45}{2}$

k.  $4(2\frac{2}{5})(3\frac{1}{2})(\frac{4}{5}) = 26\frac{22}{25}$

l.  $15 \div \frac{5}{6} = 18$

m.  $9 \div \frac{2}{3} = 13\frac{1}{2}$

n.  $\frac{-5}{6} \div 3 = -\frac{5}{18}$

o.  $\frac{2}{5} \div (-8) = -\frac{1}{20}$

p.  $(\frac{5}{6}) \div (\frac{5}{12}) = 2$

q.  $(\frac{-7}{9}) \div (\frac{-3}{5}) = 1\frac{8}{27}$

r.  $(-\frac{21}{25}) \div (\frac{2}{5}) = -2\frac{1}{10}$

s.  $(5\frac{1}{4}) \div (-3\frac{1}{2}) = -1\frac{1}{2}$

t.  $(3\frac{8}{9}) \div (1\frac{1}{6}) = 3\frac{1}{3}$

u.  $\frac{4}{5} \div \frac{5}{6} - \frac{1}{4} + \frac{2}{5} = 1\frac{11}{100}$

x.  $\frac{3}{4} - \left(\frac{1}{3} \times \frac{7}{8}\right) \div \frac{3}{4} = \frac{13}{36}$

v.  $\frac{1}{3} + \frac{1}{3} \times \frac{5}{6} \div \frac{1}{2} = \frac{8}{9}$

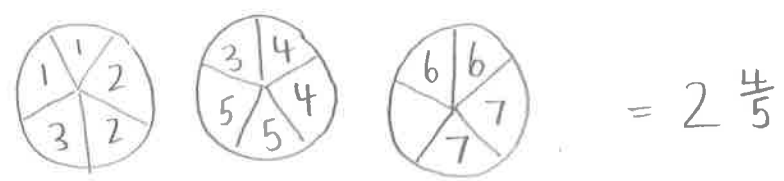
y.  $(-3) \div \left(-\frac{4}{5}\right) + \left(-\frac{5}{12}\right) \times 1\frac{1}{2} = 3\frac{1}{8}$

w.  $6\frac{3}{4} \div \left(3\frac{2}{3} - 1\frac{1}{6}\right) = 2\frac{7}{10}$

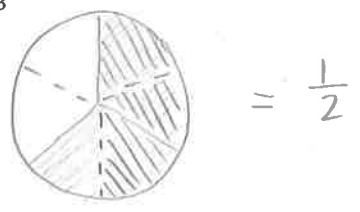
z.  $\left(1\frac{5}{8}\right) - \left(-2\frac{3}{4} + 2\right)\left(-2\frac{3}{4} + 2\right) = 1\frac{1}{16}$

2. Use fraction circles to illustrate and solve the following equations:

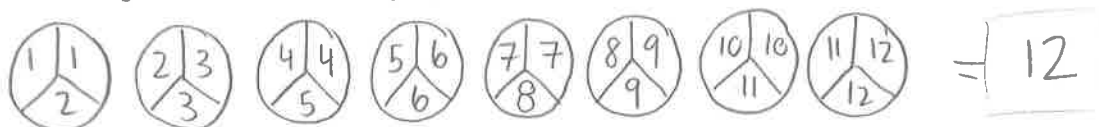
a.  $\frac{2}{5} \times 7 =$



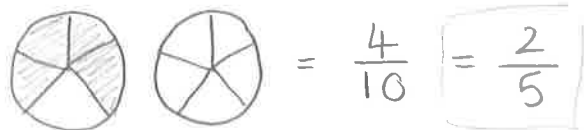
b.  $\frac{3}{4} \times \frac{2}{3} =$



c.  $8 \div \frac{2}{3} =$  How many  $\frac{2}{3}$ 's in 8?

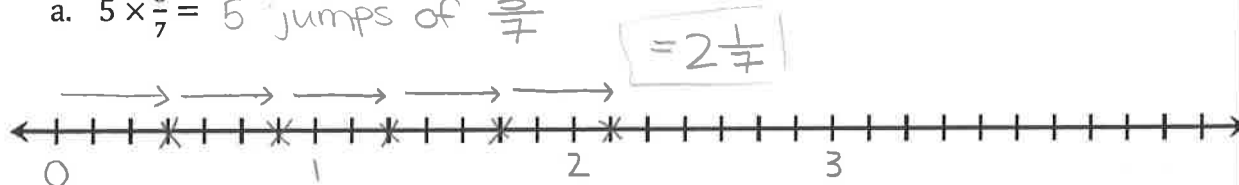


d.  $\frac{4}{5} \div 2 =$  How many 2's in  $\frac{4}{5}$ ?



3. Use a number line to illustrate and solve the following equations:

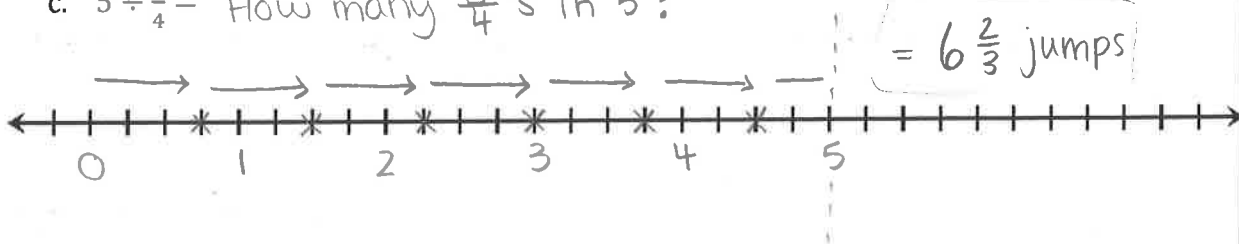
a.  $5 \times \frac{3}{7} =$  5 jumps of  $\frac{3}{7}$



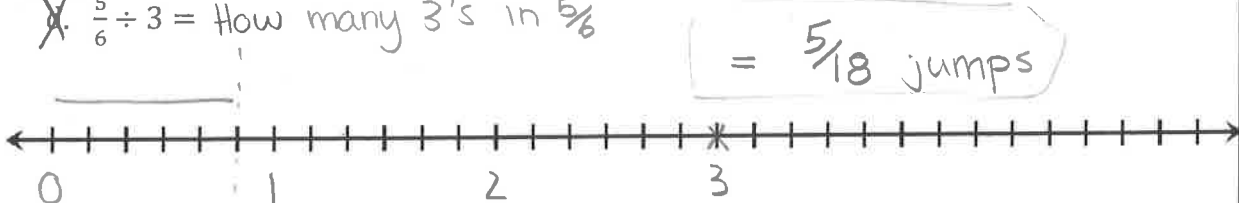
b.  $\frac{2}{3} \times \frac{1}{4} =$



c.  $5 \div \frac{3}{4} =$  How many  $\frac{3}{4}$ 's in 5?



~~x~~  $\frac{5}{6} \div 3 =$  How many 3's in  $\frac{5}{6}$



~~✓~~  $\frac{4}{5} \div \frac{1}{3} =$



~~✓~~  $\frac{1}{8} \div \frac{3}{4} =$



~~✓~~  $2\frac{1}{2} \div 4\frac{1}{3} =$



~~✓~~  $5\frac{1}{2} \div 2\frac{1}{4} =$



4. Use rectangle areas to illustrate and solve the following equations:

a.  $\frac{5}{6} \times \frac{2}{3} =$



b.  $2\frac{1}{3} \times 1\frac{3}{4} =$



32. A farmer has land measuring  $6\frac{2}{3}$  km by  $4\frac{1}{2}$  km. If the land is divided into plots that are each  $1\frac{1}{4}$  km<sup>2</sup>, how many plots would the farmer have?

area = length x width

$$= 6\frac{2}{3} \times 4\frac{1}{2}$$

$$= \frac{20}{3} \times \frac{9}{2}$$

$$= \frac{180}{6}$$

$$= 30 \text{ km}^2$$

$$\begin{aligned} \text{plots of land} &= 30 \div 1\frac{1}{4} \\ &= 30 \times \frac{4}{5} \end{aligned}$$

$$= 24 \text{ plots of land}$$

33. In a math class,  $\frac{3}{8}$  of the students have part time jobs, and  $\frac{1}{3}$  of those students are boys. If there are 40 students in the math class, how many are boys with part time jobs?

$$\begin{aligned} \text{students with part-time jobs} &= \frac{3}{8} \times 40 \\ &= 15 \text{ students} \end{aligned}$$

$$\begin{aligned} \text{Boys with part time jobs} &= 15 \times \frac{1}{3} \\ &= 5 \text{ boys} \end{aligned}$$

34. Solve the addition operation illustrated by the diagram.



$$= 2\frac{2}{3} + 1\frac{5}{8}$$

$$\text{LCM: } 3 \times 8 = 24$$

$$= 2\frac{16}{24} + 1\frac{15}{24}$$

$$= 3\frac{31}{24}$$

$$= 4\frac{7}{24}$$

35. Solve the subtraction operation illustrated by the diagram.



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

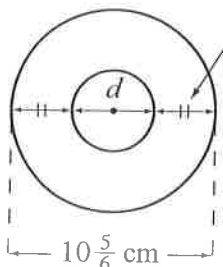
$$\text{LCM: } 8$$

$$= 2\frac{2}{8} - 1\frac{3}{8}$$

$$= 1\frac{10}{8} - 1\frac{3}{8}$$

$$= \frac{7}{8}$$

36. Find the measure of  $d$ .



$$d = 10\frac{5}{6} - 3\frac{1}{4} - 3\frac{1}{4}$$

$$= 10\frac{10}{12} - 3\frac{3}{12} - 3\frac{3}{12}$$

$$= 4\frac{4}{12}$$

$$= 4\frac{1}{3} \text{ cm}$$

$$\text{LCM: } 2 \times 2 \times 3 = 12$$

37. An average book size is  $21\frac{3}{5}$  cm  $\times$   $24\frac{3}{4}$  cm. What is the measure of the perimeter of the book?

$$P = (21\frac{3}{5} + 24\frac{3}{4}) \times 2$$

$$\text{LCM: } 5 \times 4 = 20$$

$$= (21\frac{12}{20} + 24\frac{15}{20}) \times 2$$

$$= (45\frac{27}{20}) \times 2$$

$$= (46\frac{7}{20}) \times 2$$

$$= \frac{927}{20} \times 2$$

$$= \frac{927}{10} = 92\frac{7}{10} \text{ cm}$$

38. Pavel needed  $12\frac{1}{2}$  hours to paint three bedrooms of a house. If the first two bedrooms took  $2\frac{3}{4}$  hours and  $4\frac{3}{5}$  hours, how many hours were needed to paint the third bedroom?

$$\text{LCM: } 2 \times 2 \times 5 = 20$$

$$t = 12\frac{1}{2} - 2\frac{3}{4} - 4\frac{3}{5}$$

$$t = 12\frac{10}{20} - 2\frac{15}{20} - 4\frac{12}{20}$$

$$= 11\frac{30}{20} - 2\frac{15}{20} - 4\frac{12}{20}$$

$$= 9\frac{15}{20} - 4\frac{12}{20}$$

$$= 5\frac{3}{20} \text{ hours or } 5 \text{ hours and } 9 \text{ minutes}$$

39. A survey said  $\frac{1}{5}$  Canadians smoke cigarettes,  $\frac{1}{4}$  are overweight, and  $\frac{1}{20}$  are both overweight and smoke. What fraction of Canadians are neither of these?

$$\text{LCM: } 20$$

$$P = 1 - (\frac{5}{20} + \frac{4}{20} - \frac{1}{20})$$

$$= 1 - \frac{1}{4} - \frac{1}{5} + \frac{1}{20}$$

$$= \frac{20}{20} - \frac{5}{20} - \frac{4}{20} + \frac{1}{20}$$

$$= \frac{12}{20}$$

$$= \frac{3}{5} \text{ Canadians}$$

