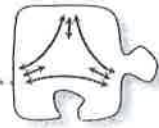


3.1.5 Is there a more efficient way?

Completing the Web



3-67 CONVERTING BETWEEN PERCENTS AND DECIMALS

a) Work with your team to complete the t-chart at right.

76% 100%
120% 32.5%

Percent	Decimal
76	0.76
100	1.00
120	1.20
32.5	0.325

b) Now reverse your thinking to rewrite the following decimals as percents.

0.31 0 1.16
0.06 0.042 45.2

3-68 CONVERTING FRACTIONS TO DECIMALS

Julia knows that fractions are about finding parts, so she drew the segment below.



a) Divide the line segment into five equal parts. Each mark you drew represents what fraction of the whole? Label the first mark with the appropriate fraction.

b) The sections you made in part (a) each represent one (1) whole divided into five (5) parts. How can you use your calculator to find the decimal value for $\frac{1}{5}$? Add the appropriate decimal value label to the first mark on the diagram above.

c) Julia is still trying to figure out what decimal to write for $\frac{3}{5}$. What should she write?

d) What if Julia was thinking about $\frac{17}{5}$? How can she use her knowledge of the decimal value of $\frac{1}{5}$ to find the decimal value of $\frac{17}{5}$?

e) How can you use the ideas in this problem to find the decimal value of $\frac{5}{8}$? $\frac{19}{4}$?

f) Describe how to do this for any fraction.

3-6

3-6



e



f) Key idea: For any fraction, you can divide to convert to a decimal.

ex $\frac{2}{5} = 2 \div 5 = 0.40$

6

7 6
nthns hundred
edths 2
2 0

1.

nthns = 4.2
20%

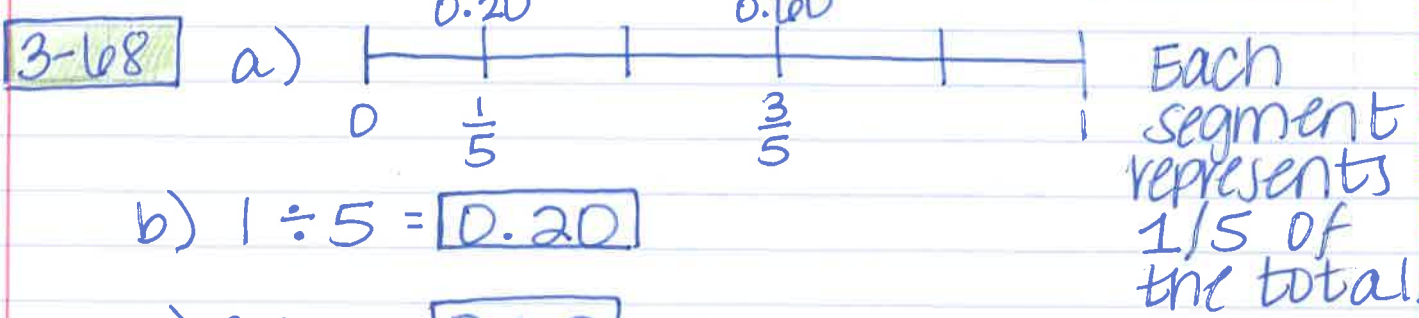
each segment represents 1/5 of the total.

17 by 5.
1 0.2 x 17

top bottom


3-67 a) $76\% = 76$ hundredths = $\underline{\quad} \cdot \frac{7}{\text{tenths}} \frac{6}{\text{hundredths}}$
 $100\% = 1$ whole = 1.00
 $120\% = 1$ whole and 20 hundredths \rightarrow
 $32.5\% = \underline{\quad} \cdot \frac{3}{\text{tenths}} \frac{2}{\text{hundredths}} \frac{5}{\text{thousandths}}$

b) $0.31 = 31$ hundredths = $\boxed{31\%}$
 $0 = \boxed{0\%}$
 $1.16 = 1$ and 16 hundredths = $\boxed{116\%}$
 $0.06 = 6$ hundredths = $\boxed{6\%}$
 $0.042 = 4$ hundredths + 2 thousandths = $\boxed{4.2\%}$
 $45.20 = 45$ and 20 hundredths = $\boxed{4520\%}$



b) $1 \div 5 = \boxed{0.20}$
c) $3 \div 5 = \boxed{0.60}$
d) $17 \div 5 = \boxed{3.40}$ she could divide 17 by 5. (she can also multiply 0.2×17)

e) $5 \div 8 = \boxed{0.625}$ you can divide the top number by the bottom.
 $19 \div 4 = \boxed{4.75}$

f)  Key idea: For any fraction, you can divide to convert to a decimal.

ex $\frac{2}{5} = 2 \div 5 = 0.40$