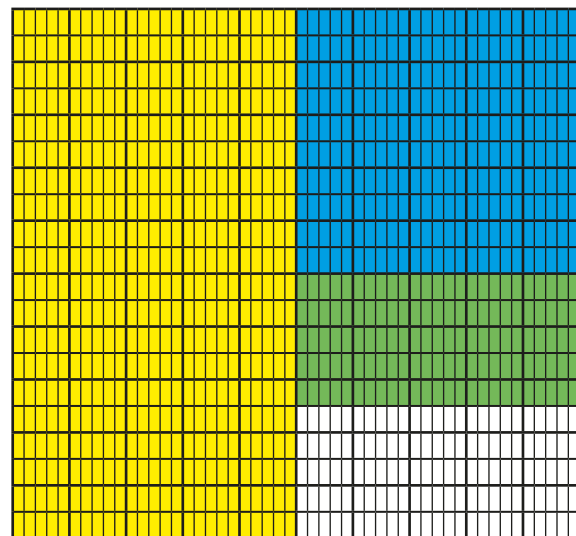


Convert between fractions and decimals – eighths and thousandths

H



1 Use the thousand square to complete the equivalent fractions.



a) $\frac{1}{2} = \frac{500}{1000}$

b) $\frac{1}{4} = \frac{250}{1000}$

c) $\frac{1}{8} = \frac{125}{1000}$

d) Use your answer to part c) to write $\frac{1}{8}$ as a decimal.

Discuss any patterns you spot with a partner.

0.125

2 Complete the statements.

a) $\frac{1}{4}$ is a half of $\frac{1}{2}$ so $\frac{1}{8}$ is a half of $\frac{1}{4}$

b) $0.25 = \frac{1}{4}$

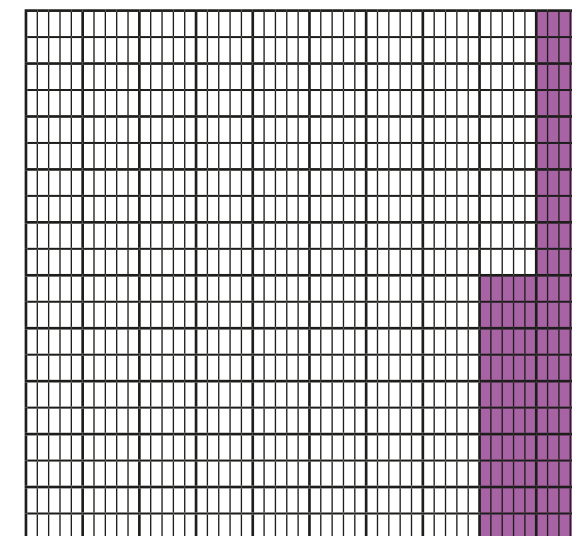
c) $0.75 = \frac{3}{4}$

$0.25 = \frac{2}{8}$

$0.75 = \frac{6}{8}$

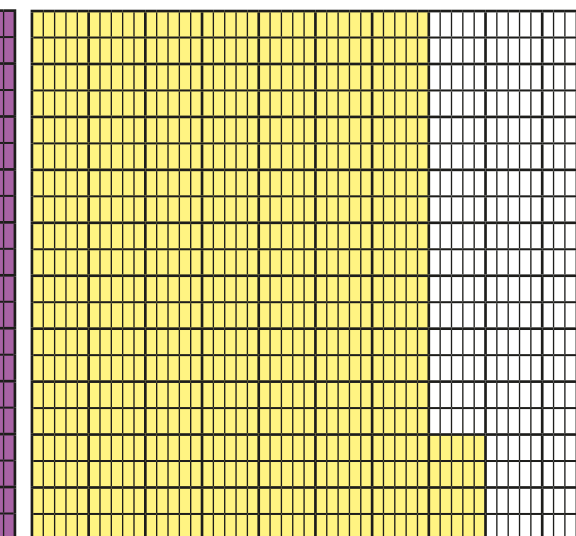
3 What fraction of the thousand square is shaded?

a)



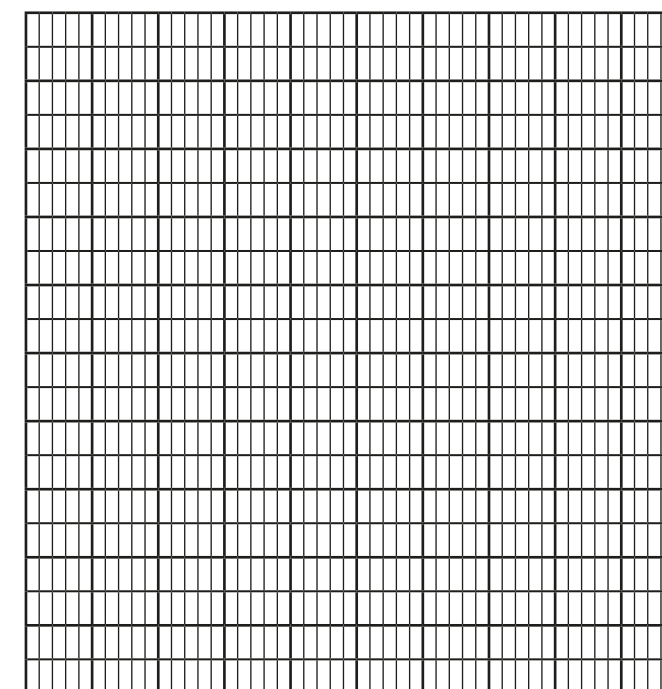
$\frac{150}{1000}$

b)



$\frac{720}{1000}$

4 Use the thousand square to help you.



a) How many thousandths are equal to two-hundredths?

20

b) How many thousandths are equal to $\frac{2}{10}$?

200

5 Complete the statements.

a) $\frac{300}{1000} = \frac{30}{100} = \frac{3}{10} = 0.\underline{3}$

b) $\frac{800}{1000} = \frac{80}{100} = \frac{8}{10} = \frac{4}{5} = 0.\underline{8}$

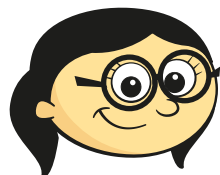
c) $\frac{480}{1000} = \frac{48}{100} = 0.\underline{48}$

e) $0.6 = \frac{6}{10} = \frac{60}{100} = \frac{600}{1000}$

d) $\frac{389}{1000} = 0.\underline{389}$

f) $0.67 = \frac{67}{100} = \frac{670}{1000}$

6 Annie is trying to work out $\frac{3}{8}$ as a decimal.



$\frac{3}{8}$ is equal to $\frac{375}{1000}$,
which is 375

Explain and correct Annie's error.

It is equal to 375 thousandths which is
0.375 not 375

7 Given that $\frac{1}{8} = 0.125$, complete the table.

Fraction	$\frac{2}{8}$	$\frac{3}{8}$	$\frac{5}{8}$	$\frac{10}{8}$	$\frac{11}{8}$
Decimal	0.25	0.375	0.625	1.25	1.375

8 Write the fractions in descending order.

$$\frac{3}{5}$$

$$\frac{4}{10}$$

$$\frac{5}{8}$$

$$\frac{71}{100}$$

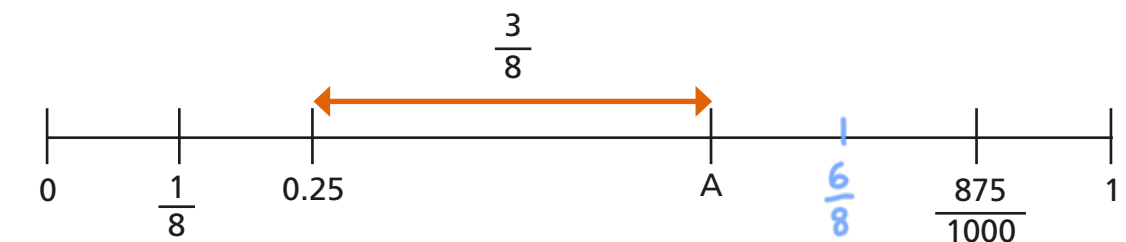
$$\frac{71}{100}$$

$$\frac{5}{8}$$

$$\frac{3}{5}$$

$$\frac{4}{10}$$

9



a) What is the fraction at point A?

$$\frac{5}{8}$$

b) Label $\frac{6}{8}$ in approximately the correct place on the number line.

10

a) Circle all the fractions that cannot be simplified to quarters.

$$\frac{1}{8}$$

$$\frac{2}{8}$$

$$\frac{3}{8}$$

$$\frac{4}{8}$$

$$\frac{5}{8}$$

$$\frac{6}{8}$$

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

$$\frac{8}{8}$$

b) What do you notice about all of the circled fractions?

The numerators are odd.