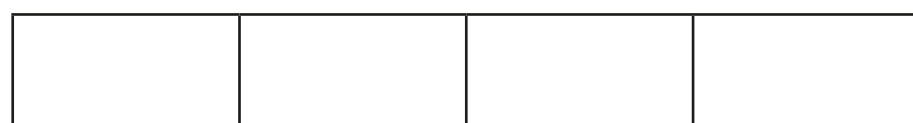
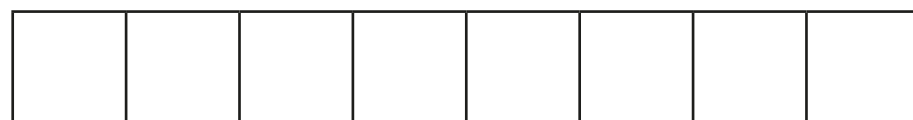


Compare and order fractions less than 1

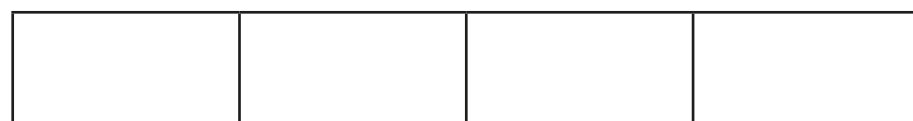
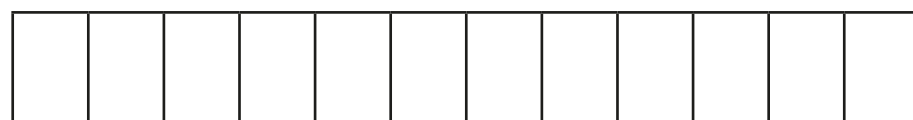


1 Write $<$, $>$ or $=$ to compare the fractions.

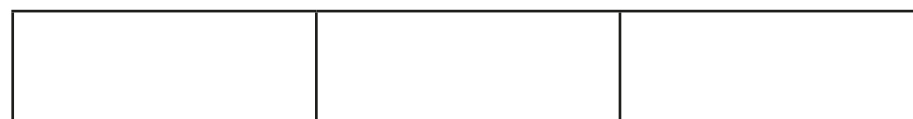
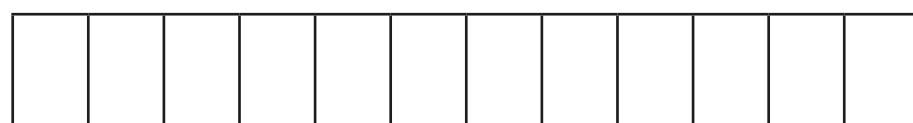
Use the bar models to help you.



$$\frac{7}{8} \bigcirc \frac{3}{4}$$



$$\frac{9}{12} \bigcirc \frac{3}{4}$$



$$\frac{7}{12} \bigcirc \frac{2}{3}$$

2 Write $<$, $>$ or $=$ to compare the fractions.

$$\text{a) } \frac{1}{5} \bigcirc \frac{4}{15}$$

$$\text{g) } \frac{2}{9} \bigcirc \frac{1}{3}$$

$$\text{b) } \frac{2}{5} \bigcirc \frac{4}{15}$$

$$\text{h) } \frac{4}{9} \bigcirc \frac{1}{3}$$

$$\text{c) } \frac{2}{5} \bigcirc \frac{6}{15}$$

$$\text{i) } \frac{4}{12} \bigcirc \frac{1}{3}$$

$$\text{d) } \frac{2}{3} \bigcirc \frac{6}{15}$$

$$\text{j) } \frac{8}{12} \bigcirc \frac{2}{3}$$

$$\text{e) } \frac{2}{3} \bigcirc \frac{6}{12}$$

$$\text{k) } \frac{8}{12} \bigcirc \frac{3}{3}$$

$$\text{f) } \frac{2}{3} \bigcirc \frac{6}{9}$$

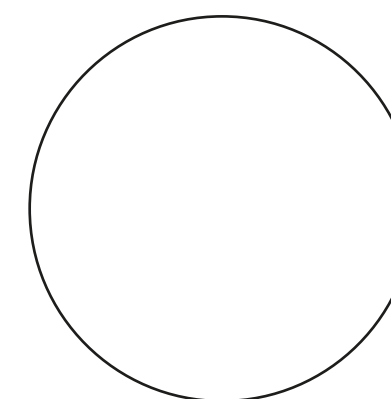
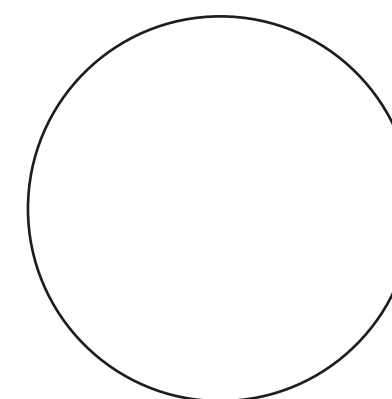
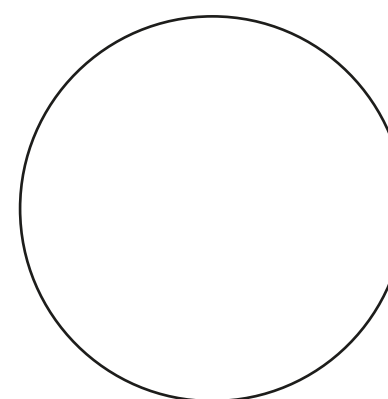
$$\text{l) } \frac{8}{12} \bigcirc \frac{3}{4}$$

3 Sort the fractions into the circles.

greater than $\frac{1}{3}$

equal to $\frac{1}{3}$

less than $\frac{1}{3}$



$\frac{2}{3}$	$\frac{1}{6}$	$\frac{1}{2}$	$\frac{2}{6}$	$\frac{2}{9}$	$\frac{5}{12}$	$\frac{4}{12}$	$\frac{4}{15}$	$\frac{5}{15}$
---------------	---------------	---------------	---------------	---------------	----------------	----------------	----------------	----------------

- 4 What could the missing numerators and denominators be?

Write a number in each box to make the statements correct.

a) $\frac{\boxed{}}{5} < \frac{5}{15}$

d) $\frac{\boxed{}}{3} < \frac{5}{6}$

g) $\frac{6}{9} < \frac{5}{\boxed{}}$

b) $\frac{\boxed{}}{6} < \frac{5}{12}$

e) $\frac{3}{5} < \frac{5}{\boxed{}}$

h) $\frac{10}{12} < \frac{5}{\boxed{}}$

c) $\frac{\boxed{}}{12} < \frac{5}{6}$

f) $\frac{5}{6} < \frac{5}{\boxed{}}$

i) $\frac{23}{24} < \frac{5}{\boxed{}}$

Compare answers with a partner.

- 5 Tommy and Eva are comparing fractions.

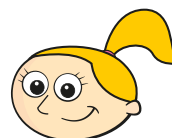
$\frac{2}{3}$ $\frac{8}{12}$ $\frac{4}{9}$



Tommy

I found a common denominator of 36 to compare the fractions.

I found a common numerator of 4 to compare the fractions.



Eva

Whose method is more efficient? _____

Talk about your answer with a partner.

- 6 Write the fractions in ascending order.

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

b) $\frac{2}{3}, \frac{5}{9}, \frac{1}{9}, \frac{5}{6}, \frac{2}{9}$

c) $\frac{3}{5}, \frac{7}{10}, \frac{1}{2}, \frac{3}{10}, \frac{1}{5}$

d) $\frac{3}{8}, \frac{6}{17}, \frac{12}{30}, \frac{2}{7}, \frac{1}{3}$

- 7 What could the missing numerator be?

$\frac{3}{5} < \frac{\boxed{}}{15} < \frac{9}{10}$

Write all four possibilities.

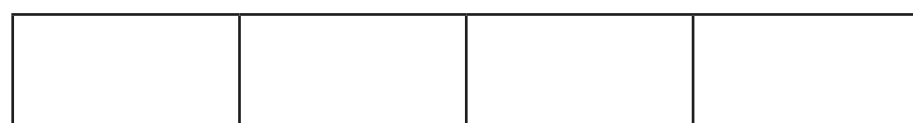
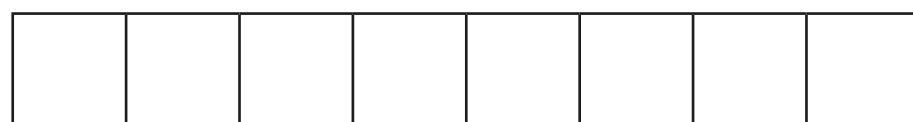
$\frac{\boxed{}}{15}$ $\frac{\boxed{}}{15}$ $\frac{\boxed{}}{15}$ $\frac{\boxed{}}{15}$

Compare and order fractions less than 1

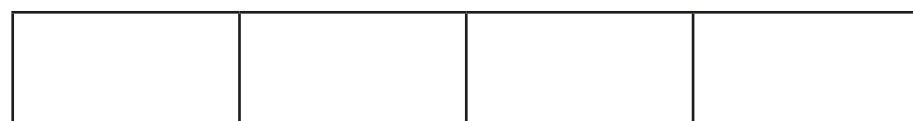
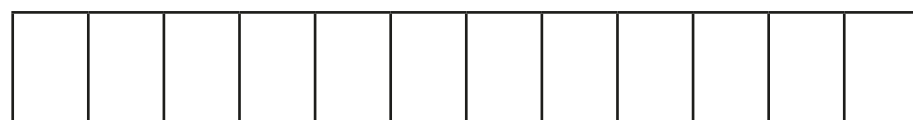


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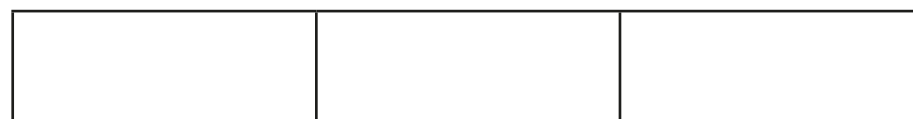
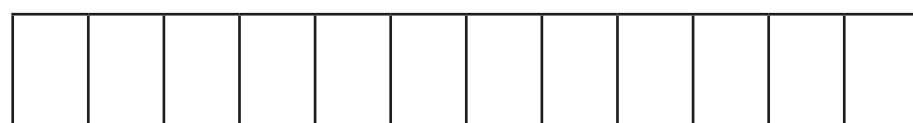
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$$\frac{9}{12} \bigcirc \frac{3}{4}$$



$$\frac{7}{12} \bigcirc \frac{2}{3}$$

2 Write $<$, $>$ or $=$ to compare the fractions.

$$\text{a) } \frac{1}{5} \bigcirc \frac{4}{15}$$

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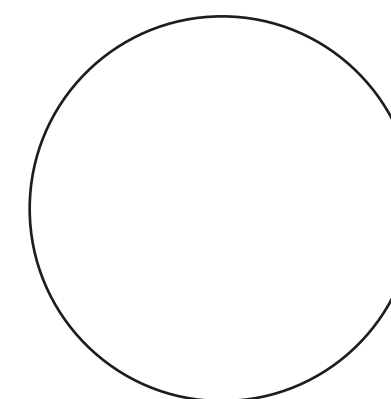
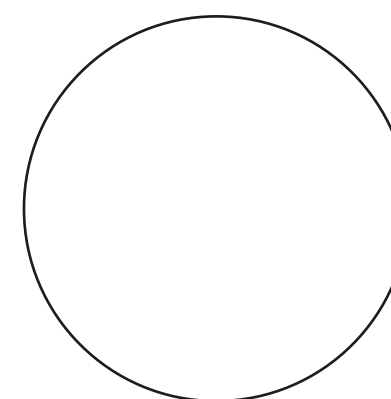
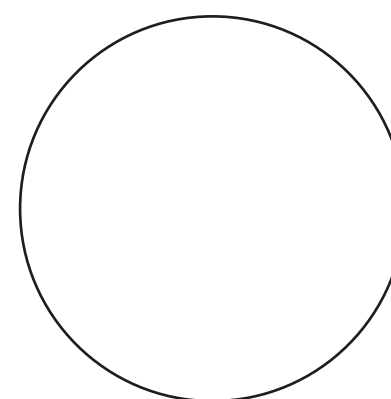
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$\frac{2}{3}$	$\frac{1}{6}$	$\frac{1}{2}$	$\frac{2}{6}$	$\frac{2}{9}$	$\frac{5}{12}$	$\frac{4}{12}$	$\frac{4}{15}$	$\frac{5}{15}$
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b) $\frac{\boxed{}}{6} < \frac{5}{12}$

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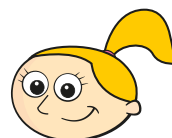
$\frac{2}{3}$ $\frac{8}{12}$ $\frac{4}{9}$



Tommy

I found a common denominator of 36 to compare the fractions.

I found a common numerator of 4 to compare the fractions.



Eva

Whose method is more efficient? _____

Talk about your answer with a partner.

- 6 Write the fractions in ascending order.

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

b) $\frac{2}{3}, \frac{5}{9}, \frac{1}{9}, \frac{5}{6}, \frac{2}{9}$

c) $\frac{3}{5}, \frac{7}{10}, \frac{1}{2}, \frac{3}{10}, \frac{1}{5}$

d) $\frac{3}{8}, \frac{6}{17}, \frac{12}{30}, \frac{2}{7}, \frac{1}{3}$

- 7 What could the missing numerator be?

$\frac{3}{5} < \frac{\boxed{}}{15} < \frac{9}{10}$

Write all four possibilities.

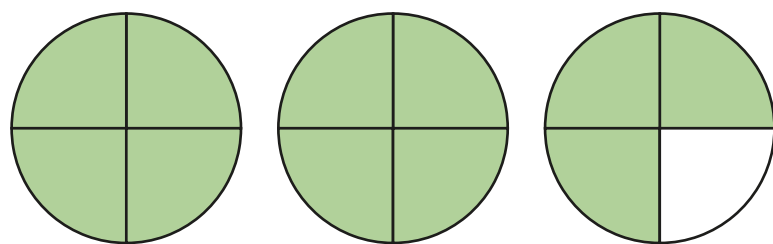
$\frac{\boxed{}}{15}$ $\frac{\boxed{}}{15}$ $\frac{\boxed{}}{15}$ $\frac{\boxed{}}{15}$

Mixed numbers to improper fractions



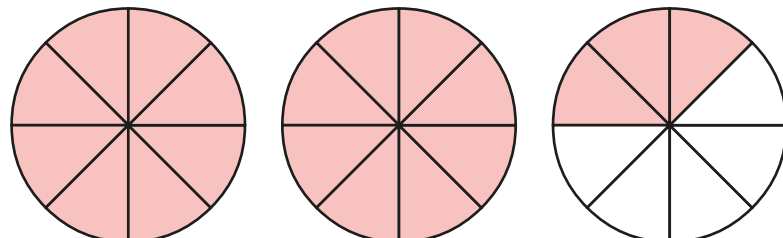
1 Convert the mixed numbers to improper fractions.

a)



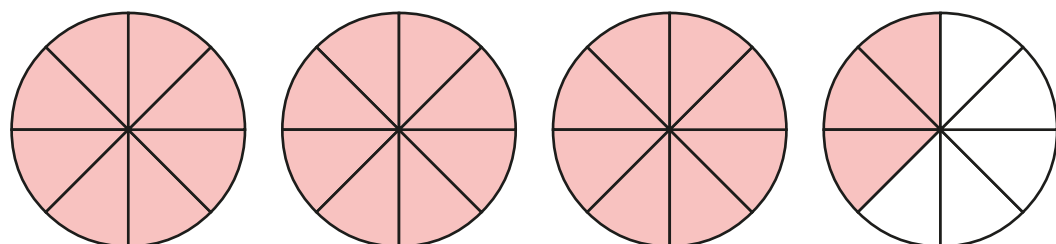
$$2\frac{3}{4} = \frac{\boxed{}}{4}$$

b)



$$2\frac{3}{8} = \frac{\boxed{}}{8}$$

c)

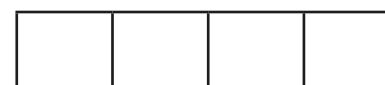


$$3\frac{3}{8} = \frac{\boxed{}}{8}$$

2 Convert the mixed numbers to improper fractions.

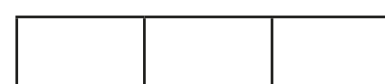
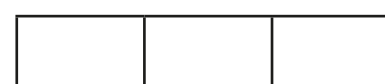
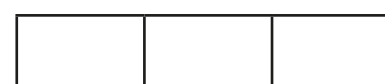
Colour the bar models to help you.

a)



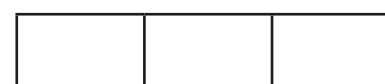
$$2\frac{1}{4} = \boxed{}$$

b)



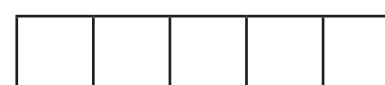
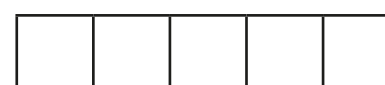
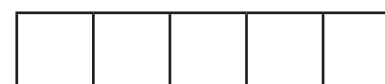
$$2\frac{1}{3} = \boxed{}$$

c)



$$3\frac{1}{3} = \boxed{}$$

d)



$$3\frac{2}{5} = \boxed{}$$



3 Convert the mixed numbers to improper fractions.

Write the next conversion in each part.

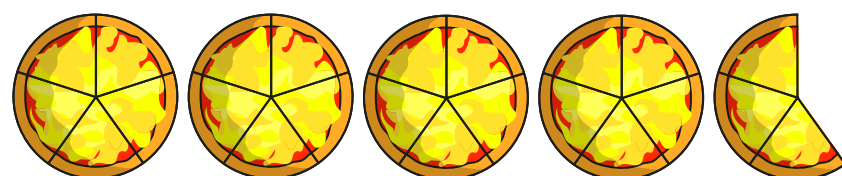
a) $2\frac{1}{7} =$
 $2\frac{2}{7} =$
 $2\frac{3}{7} =$
 =

c) $5\frac{1}{2} =$
 $5\frac{1}{4} =$
 $5\frac{1}{8} =$
 =

b) $3\frac{1}{5} =$
 $4\frac{1}{5} =$
 $5\frac{1}{5} =$
 =

Talk to a partner about any patterns you spot.

4 Here are 4 whole pizzas and $\frac{3}{5}$ of a pizza.



How many children can have $\frac{1}{5}$ of a pizza?

5 Whitney is converting mixed numbers to improper fractions.



$$4\frac{1}{7} = \frac{28}{7}$$

Do you agree with Whitney? _____

Explain your answer.

6

$$\text{circle} \frac{3}{5} = \text{triangle} \frac{1}{5}$$

The table shows some possible values of the circle.

Use this to find the corresponding value of the triangle.

●	▲
1	
2	
4	
8	
16	
	88
	803

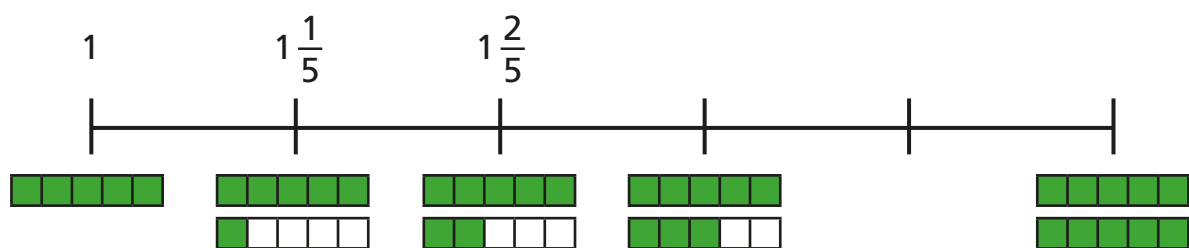


Number sequences

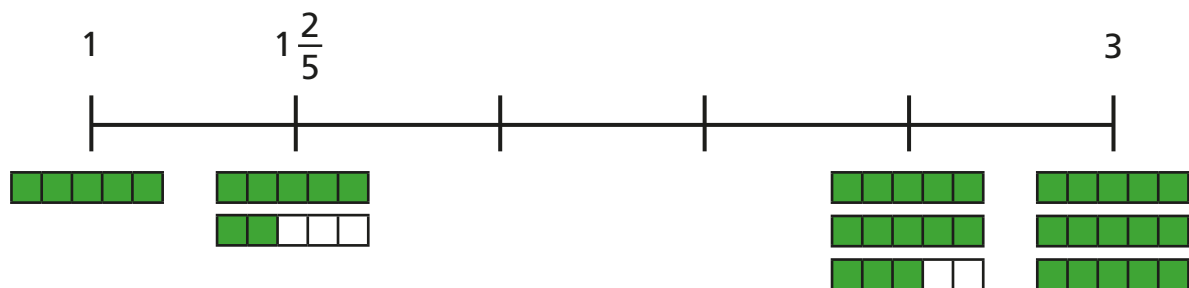


1 Complete the number lines.

a)

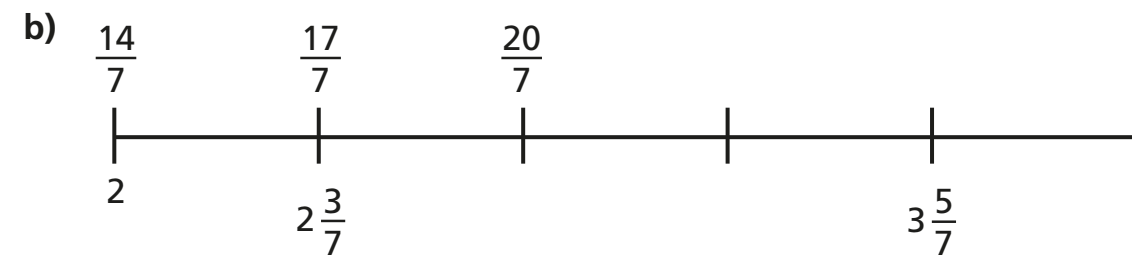
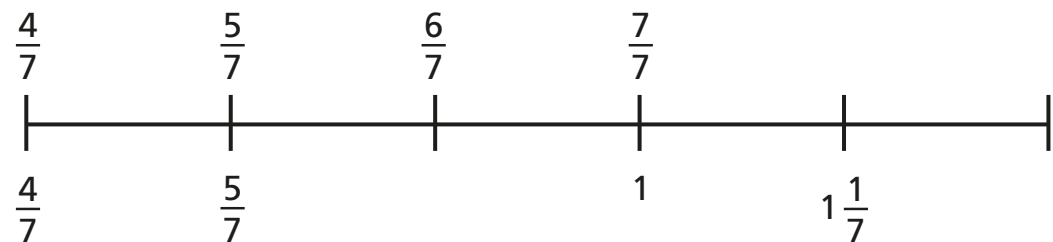


b)



2 Complete the number lines.

a)



3 Continue the sequences.

a) $2\frac{7}{8}$, $3\frac{1}{8}$, $3\frac{3}{8}$, , ,

b) $5\frac{6}{7}$, $5\frac{3}{7}$, 5, , ,

c) $5\frac{6}{11}$, $5\frac{3}{11}$, 5, , ,

What is the same and what is different about the sequences in parts b) and c)?

Talk about it with a partner.



4 Match each sequence to its rule.

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

add three quarters

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

subtract two thirds

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

add two thirds

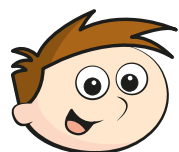
$4\frac{1}{4}, 3\frac{3}{4}, 3\frac{1}{4}, 2\frac{3}{4}$

subtract one half

5 Teddy and Rosie are finding the missing numbers in the sequence.

3, , , , , , , , 4

a)



I think the missing fractions are sevenths because there are seven blank number cards.

Do you agree with Teddy? _____

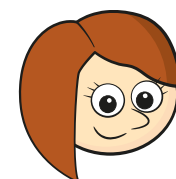
Explain your answer.



b) Complete the sequence.

3, , , , , , , , 4

c)



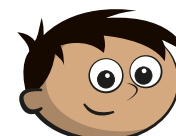
I think one of the missing fractions is equivalent to $3\frac{1}{2}$

Is Rosie correct? _____

Explain how you know.

d) Which other fractions in the sequence can you find equivalent fractions for?

6



I am thinking of a number sequence. The 1st and 4th terms are consecutive integers.

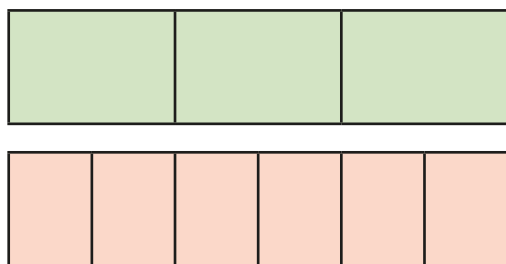
Write the rule for Amir's sequence.

Compare and order fractions greater than 1

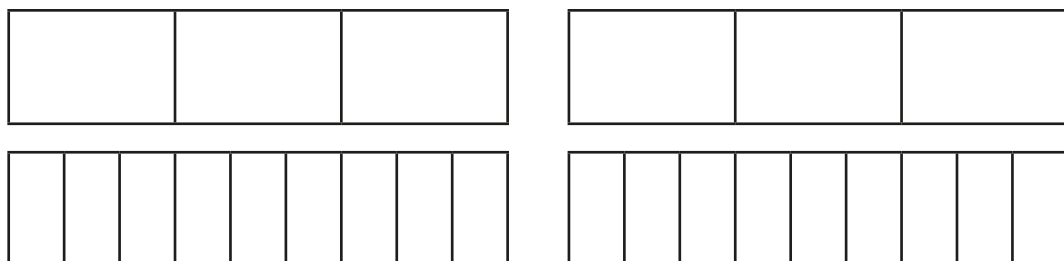


- 1 Write $<$, $>$ or $=$ to compare the fractions.
Use the bar models to help you.

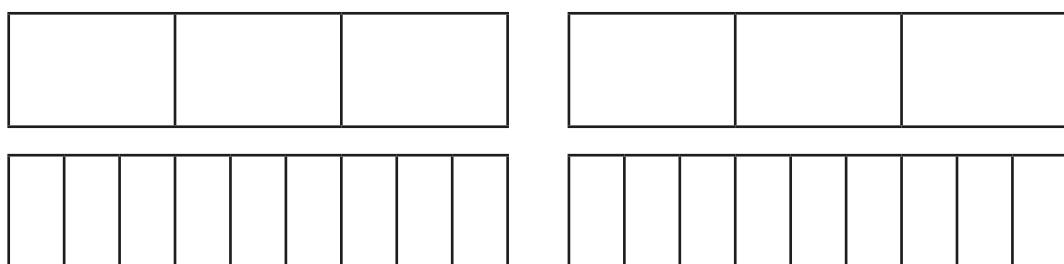
a) $\frac{5}{3}$ $\frac{9}{6}$



b) $\frac{5}{3}$ $\frac{15}{9}$



c) $\frac{4}{3}$ $\frac{13}{9}$



- 2 Write $<$, $>$ or $=$ to compare the fractions.

a) $\frac{7}{4}$ $\frac{12}{8}$

d) $\frac{10}{6}$ $\frac{5}{3}$

g) $\frac{18}{8}$ $\frac{32}{16}$

b) $\frac{7}{4}$ $\frac{22}{12}$

e) $\frac{10}{6}$ $\frac{5}{2}$

h) $\frac{18}{8}$ $\frac{9}{4}$

c) $\frac{22}{12}$ $\frac{10}{6}$

f) $\frac{5}{2}$ $\frac{18}{8}$

i) $\frac{9}{4}$ $\frac{18}{2}$

- 3 Filip has $3\frac{3}{16}$ bottles of juice.

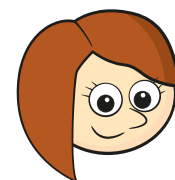
Scott has $3\frac{1}{4}$ bottles of juice.

Who has more juice?

_____ has more juice.

- 4 Rosie's ribbon is $\frac{7}{4}$ metres long.

Teddy's ribbon is $\frac{7}{8}$ metres long.



Our ribbons are the same length.

Explain why Rosie is wrong.



5 Write the fractions in descending order.

a) $\frac{8}{3}, \frac{4}{5}, \frac{8}{15}, \frac{8}{2}, \frac{16}{8}$

b) $\frac{7}{3}, \frac{12}{9}, \frac{15}{9}, \frac{15}{6}, \frac{7}{9}$

c) $\frac{14}{5}, \frac{17}{10}, \frac{27}{10}, \frac{3}{1}, \frac{42}{20}$

6 Find three possible ways to complete each statement.

a) $\frac{1}{4} < \frac{\boxed{}}{4} < \frac{9}{8}$

$\frac{1}{4} < \frac{\boxed{}}{4} < \frac{9}{8}$

$\frac{1}{4} < \frac{\boxed{}}{4} < \frac{9}{8}$

c) $\frac{4}{5} < \frac{8}{\boxed{}} < \frac{8}{4}$

$\frac{4}{5} < \frac{8}{\boxed{}} < \frac{8}{4}$

$\frac{4}{5} < \frac{8}{\boxed{}} < \frac{8}{4}$

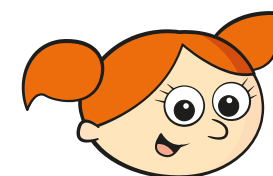
b) $\frac{1}{4} < \frac{\boxed{}}{15} < \frac{7}{15}$

$\frac{1}{4} < \frac{\boxed{}}{15} < \frac{7}{15}$

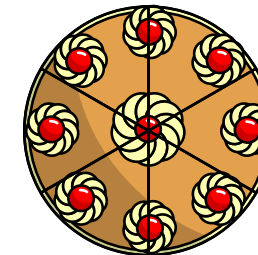
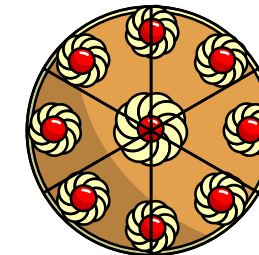
$\frac{1}{4} < \frac{\boxed{}}{15} < \frac{7}{15}$

7 Alex and Dora each have two identical cakes.

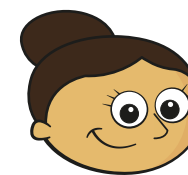
Alex cuts each of her cakes into 6 equal pieces and gives 10 of her friends a piece each.



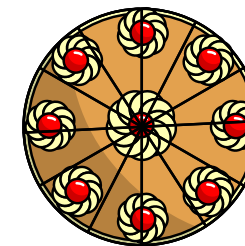
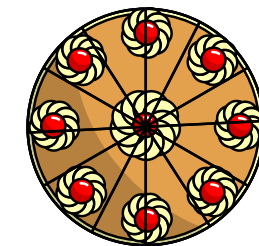
Alex



Dora cuts each of her cakes into 12 equal pieces and gives 18 of her friends a piece each.



Dora



Who has more cake left?

_____ has more cake left.

8 The greater the numerator, the greater the fraction.

Give at least three examples to show that the statement is not correct.

