Warm up Grade 6

Date: Jan 18

Chapter 5

Lesson 3 Day 2.5

Compare to determine which is larger

Copy down

Mixed $3\frac{7}{12}$ Bigger

Improper $\frac{7}{2}$

$\Rightarrow 3\frac{1}{2}$ $\times 6$ $\times 6$ ①

$3\frac{6}{12}$ ①

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

①

Practice

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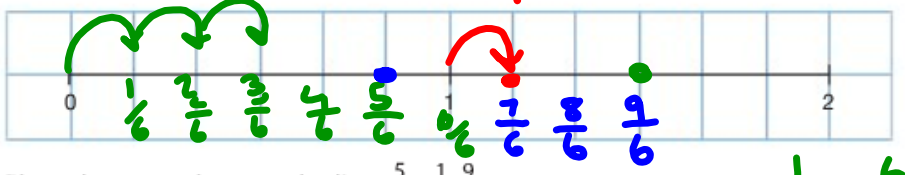
Your teacher will give you copies of number lines for questions 3, 6, and 7.

HW Solutions

1. Use 1-cm grid paper.
Draw a 12-cm number line like the one below.



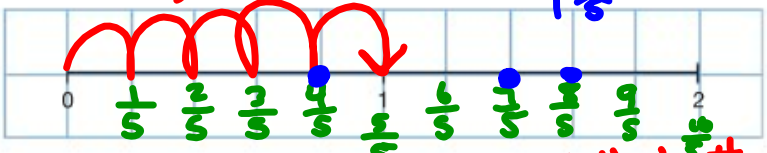
Place these numbers on the line: $\frac{5}{6}, 1\frac{1}{6}, \frac{9}{6}$

1 = 6/6

1 line cut into 6 pieces

$1\frac{1}{6} = \frac{7}{6}$

2. Use 1-cm grid paper.
Draw a 10-cm number line like the one below.



Place these numbers on the line: $1\frac{3}{5}, \frac{7}{5}, \frac{4}{5}$

Take 5 jumps to get to 1

5 jumps

1 whole # cut into 5 pieces

3. Find equivalent fractions so the fractions in each pair have the same denominator.
Place each pair of fractions on a number line.

a) $\frac{8}{3}$ and $\frac{6}{4}$

b) $\frac{12}{5}$ and $\frac{8}{3}$

c) $\frac{14}{6}$ and $\frac{17}{8}$

d) $\frac{11}{10}$ and $\frac{20}{15}$

e) $\frac{9}{5}$ and $\frac{8}{6}$

f) $\frac{12}{9}$ and $\frac{11}{5}$

a) $\frac{8}{3} \times\frac{4}{4} = \frac{32}{12}$ Bigger

$\frac{6}{4} \times\frac{3}{3} = \frac{18}{12}$

Mult

3 → 3, 6, 9, 12, 15

4 → 4, 8, 12

b) $\frac{12}{5} \times\frac{3}{3} = \frac{36}{15}$

$\frac{8}{3} \times\frac{5}{5} = \frac{40}{15}$ Bigger

3 → 3, 6, 9, 12, 15, ...

5 → 5, 10, 15, 20

Mixed to improper

$$2\frac{1}{7} = \frac{15}{7}$$

(2 → ×7 → +1 → 15)

Improper to Mixed → Divison with Remainder of fraction

$$\frac{38}{7} = 5\frac{3}{7}$$

$$7\overline{)38}$$

5

-35

3 Remainder

Do this together

3. Find equivalent fractions so the fractions in each pair have the same denominator.

c) $\frac{14}{6}$ and $\frac{17}{8}$ d) $\frac{11}{10}$ and $\frac{20}{15}$

e) $\frac{9}{5}$ and $\frac{8}{6}$ f) $\frac{12}{9}$ and $\frac{11}{5}$

6 → 6, 12, 18, 24, 30 ...

8 → 8, 16, 24, ...

c) $\frac{14}{6} \overset{\times 4}{=} \frac{56}{24}$ Bigger ($\times 4$)

$\frac{17}{8} \overset{\times 3}{=} \frac{51}{24}$ ($\times 3$)

OR ©

$\frac{14}{6} = 2\frac{2}{6}$

write common Denominator for fraction

$\frac{17}{8} = 2\frac{1}{8}$

$2\frac{2}{6} \overset{\times 4}{=} 2\frac{8}{24}$ Bigger

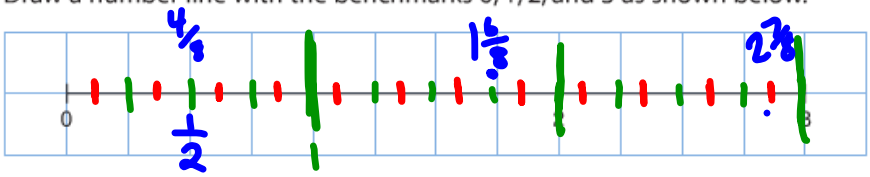
$2\frac{1}{8} \overset{\times 3}{=} 2\frac{3}{24}$

d) $\frac{11}{10} \overset{\times 3}{=} \frac{33}{30}$

$\frac{20}{15} \overset{\times 2}{=} \frac{40}{30}$ Bigger ($\times 2$)

4. Use 1-cm grid paper.

Draw a number line with the benchmarks 0, 1, 2, and 3 as shown below.



Place these numbers on the number line:

$\frac{1}{2}$, $\frac{23}{8}$, $1\frac{3}{4}$

$\frac{1}{2}$, $2\frac{7}{8}$, $1\frac{3}{4}$

C. D → 8

$\frac{4}{8}$, $2\frac{7}{8}$, $1\frac{6}{8}$

Practice

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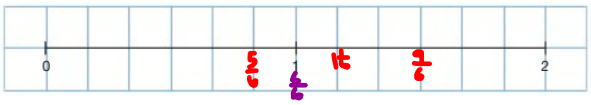
1. Use 1-cm grid paper.
Draw a 12-cm number line like the one below.



Place these numbers on the line: $\frac{5}{6}$, $1\frac{1}{6}$, $\frac{9}{6}$

2. Use 1-cm grid paper.
Draw a 10-cm number line like the one below.

Place these numbers on the line: $1\frac{3}{5}$, $\frac{7}{5}$, $\frac{4}{5}$

3. Find equivalent fractions so the fractions in each pair have the same denominator.
Place each pair of fractions on a number line.

a) $\frac{8}{3}$ and $\frac{6}{4}$
b) $\frac{12}{5}$ and $\frac{8}{3}$
c) $\frac{14}{6}$ and $\frac{17}{8}$
d) $\frac{11}{10}$ and $\frac{20}{15}$
e) $\frac{9}{5}$ and $\frac{8}{6}$
f) $\frac{12}{9}$ and $\frac{11}{5}$

a) $\frac{8}{3} = \frac{32}{12}$ $\quad \frac{6}{4} = \frac{18}{12}$

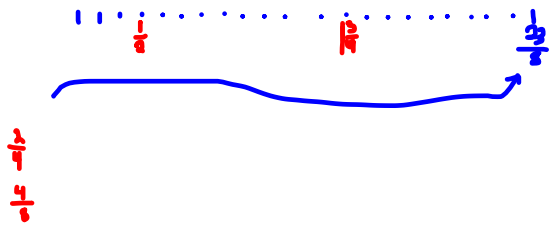
b) $\frac{12}{5} = \frac{36}{15}$ $\quad \frac{8}{3} = \frac{40}{15}$

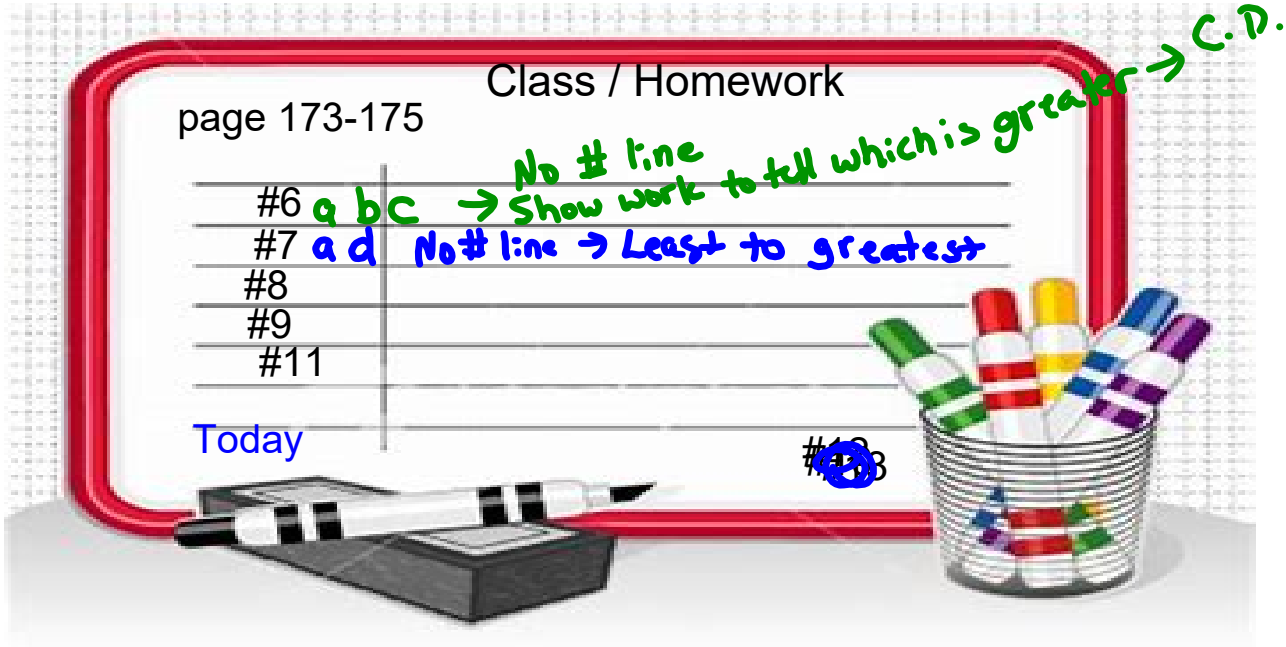
c) $\frac{14}{6} = \frac{56}{24}$ $\quad \frac{17}{8} = \frac{51}{24}$

d) $\frac{11}{10} = \frac{33}{30}$ $\quad \frac{20}{15} = \frac{40}{30}$

e) $\frac{9}{5} = \frac{54}{30}$ $\quad \frac{8}{6} = \frac{40}{30}$

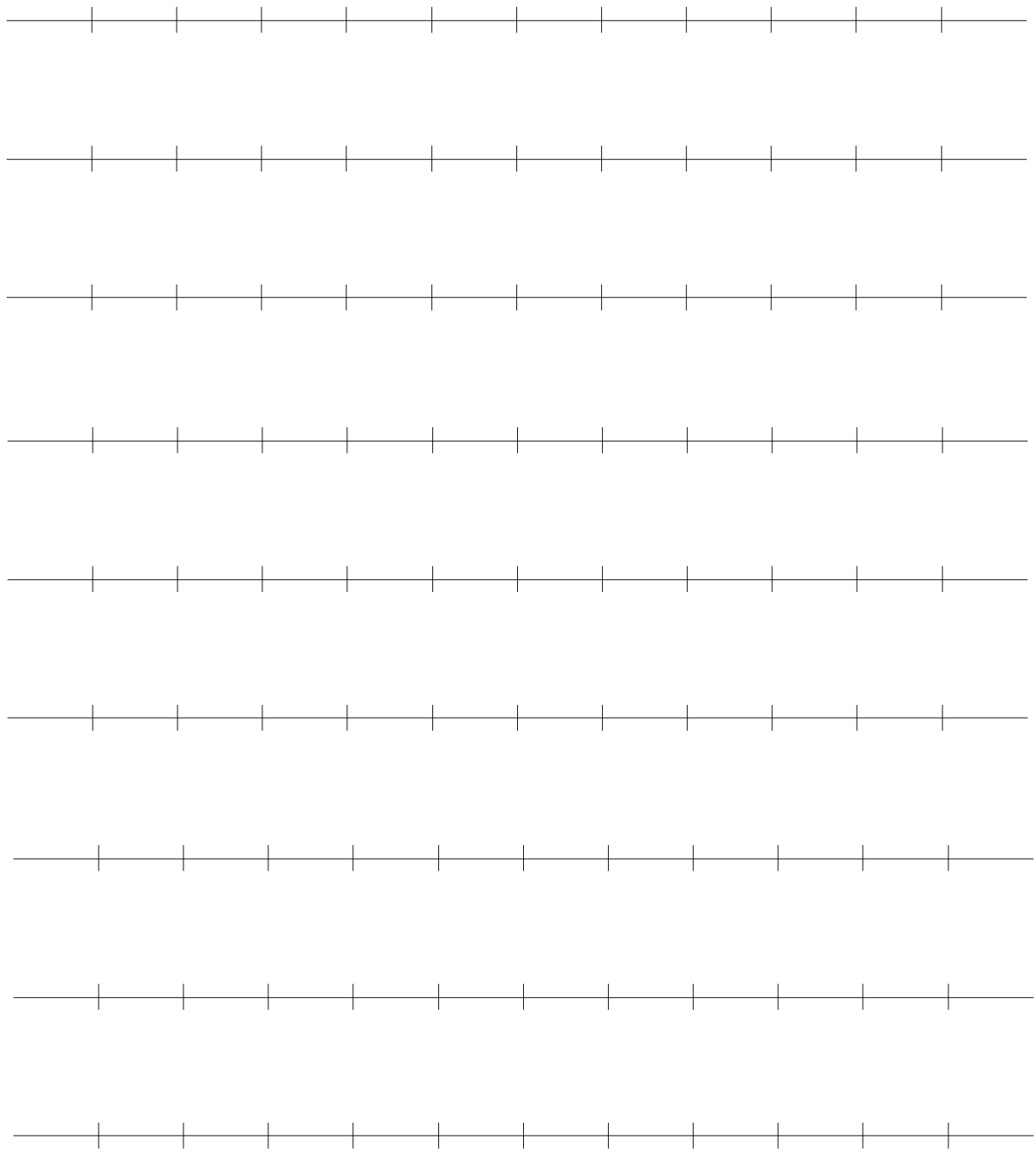
f) $\frac{12}{9} = \frac{60}{45}$ $\quad \frac{11}{5} = \frac{99}{5}$





Number lines PDF

Number lines Copy for Students



Practice

Page 173-175

Your teacher will give you copies of number lines for questions 3, 6, and 7.

1. Use 1-cm grid paper.
Draw a 12-cm number line like the one below.

Place these numbers on the line: $\frac{5}{6}$, $1\frac{1}{6}$, $\frac{9}{6}$

2. Use 1-cm grid paper.
Draw a 10-cm number line like the one below.

Place these numbers on the line: $1\frac{3}{5}$, $\frac{7}{5}$, $\frac{4}{5}$

3. Find equivalent fractions so the fractions in each pair have the same denominator.
Place each pair of fractions on a number line.

a) $\frac{8}{3}$ and $\frac{6}{4}$
b) $\frac{12}{5}$ and $\frac{8}{3}$
c) $\frac{14}{6}$ and $\frac{17}{8}$
d) $\frac{11}{10}$ and $\frac{20}{15}$
e) $\frac{9}{5}$ and $\frac{8}{6}$
f) $\frac{12}{9}$ and $\frac{11}{5}$

4. Use 1-cm grid paper.
Draw a number line with the benchmarks 0, 1, 2, and 3 as shown below.

Place these numbers on the number line:
$\frac{1}{2}$, $\frac{23}{8}$, $1\frac{3}{4}$

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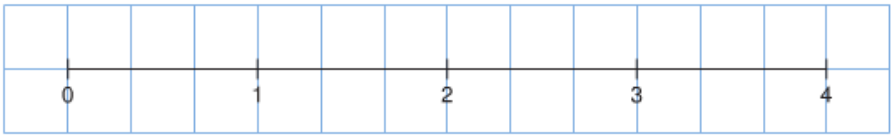
5. Use 1-cm grid paper.
Draw a number line with the benchmarks 0, 1, 2, 3, and 4 as shown below.



Place these numbers on the number line:
$\frac{5}{2}$, $\frac{2}{3}$, $1\frac{5}{6}$

6. For each pair of numbers below:
- Place the two numbers on a number line.
  Which strategy did you use?
- Which of the two numbers is greater?
  How do you know?

a) $\frac{5}{8}$; $\frac{7}{16}$ b) $\frac{3}{4}$; $\frac{9}{12}$ c) $2\frac{1}{2}$; $\frac{9}{2}$

d) $\frac{13}{10}$; $1\frac{1}{5}$ e) $\frac{29}{5}$; $6\frac{2}{10}$ f) $3\frac{5}{6}$; $3\frac{8}{12}$

7. Place the numbers in each set on a number line.
Show how you did it.
List the numbers from least to greatest.

a) $\frac{5}{6}$, $\frac{15}{9}$, $1\frac{5}{12}$ b) $\frac{9}{4}$, $2\frac{2}{3}$, $\frac{11}{6}$ c) $\frac{9}{10}$, $\frac{7}{5}$, $\frac{11}{4}$ d) $\frac{10}{3}$, $2\frac{1}{4}$, $\frac{3}{2}$

8. Hisa says that $\frac{17}{3}$ is greater than $5\frac{3}{4}$. Is she correct?
Use pictures, numbers, and words to explain.

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9. Adriel watched a $1\frac{3}{4}$-h movie on TV.
Nadir watched 3 half-hour sitcoms.
Who watched more TV? How do you know?

10. Justine played a board game for $3\frac{1}{2}$ h.
Marty played the same board game for $\frac{37}{12}$ h.
Who played longer?
Sketch a number line to show how you know you are correct.

11. Ratu, Addie, and Penny cooked pancakes for their school's maple syrup festival in McCreary, Manitoba.
Ratu made $4\frac{1}{2}$ dozen pancakes,
Addie made $\frac{28}{6}$ dozen pancakes,
and Penny made $\frac{13}{3}$ dozen pancakes.
Who made the most pancakes?
Who made the least?
Sketch a number line to show how you know.

12. Florence and her friends Rafael and Bruno race model cars.
Florence's car completed $2\frac{1}{4}$ laps of a track in 1 min.
Rafael's car completed $\frac{8}{3}$ laps of the track in 1 min.
Bruno's car completed $\frac{11}{12}$ laps of the track in 1 min.
Whose car was fastest? How do you know?

13. Use your ruler as a number line.
Visualize placing these fractions on your ruler: $4\frac{3}{5}, \frac{11}{2}, \frac{83}{10}$
Describe where you would place each fraction.
Which fraction is the greatest? The least?