

Name Jack

Date _____

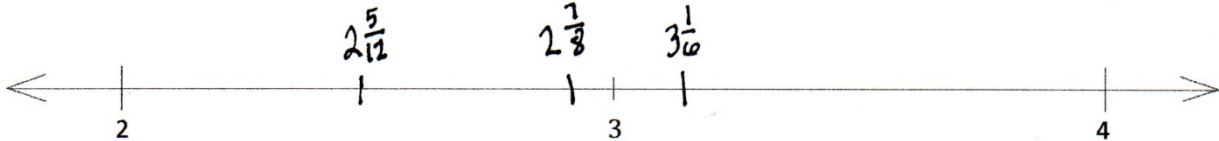
1.

a. Plot the following points on the number line without measuring.

i. $2\frac{7}{8}$

ii. $3\frac{1}{6}$

iii. $\frac{29}{12} = 2\frac{5}{12}$



b. Use the number line in (a) to compare the fractions by writing $>$, $<$, or $=$.

i. $\frac{29}{12} < 2\frac{7}{8}$

ii. $\frac{29}{12} < 3\frac{1}{6}$

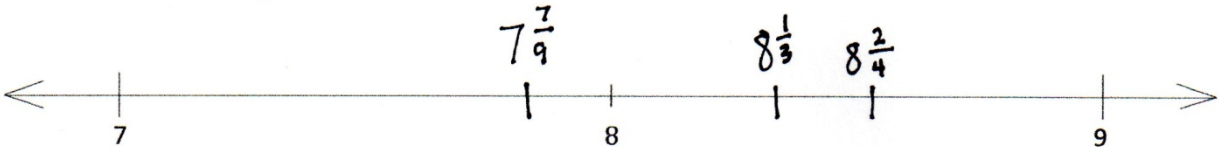
2.

a. Plot the following points on the number line without measuring.

i. $\frac{70}{9} = 7\frac{7}{9}$

ii. $8\frac{2}{4}$

iii. $\frac{25}{3} = 8\frac{1}{3}$



b. Compare the following by writing $>$, $<$, or $=$.

$8\frac{2}{4} > \frac{25}{3}$

$\frac{70}{9} < 8\frac{2}{4}$

c. Explain how you plotted the points in Problem 2(a).

I converted (i) and (iii) to mixed numbers first. $7\frac{7}{9}$ is close to 8. $8\frac{1}{3}$ is more than 8 but less than $8\frac{1}{2}$. And $8\frac{2}{4}$ is equal to $8\frac{1}{2}$, exactly between 8 and 9.

3. Compare the fractions given below by writing $>$, $<$, or $=$. Give a brief explanation for each answer referring to benchmark numbers.

a. $5\frac{1}{3} > 4\frac{3}{4}$

5 is greater than 4 so
 $5\frac{1}{3}$ is greater than $4\frac{3}{4}$.

b. $\frac{12}{6} < \frac{25}{12}$

$\frac{12}{6}$ is the same as 2, and $\frac{25}{12}$ is more than 2.

c. $\frac{18}{7} < \frac{17}{5}$

$\frac{17}{5}$ is more than 3, but you would need $\frac{21}{7}$ to make 3 so $\frac{18}{7}$ has to be less.

d. $5\frac{2}{5} < 5\frac{5}{8}$

I knew $5\frac{2}{5}$ is less than $5\frac{1}{2}$ but $5\frac{5}{8}$ is more than $5\frac{1}{2}$.

e. $6\frac{2}{3} > 6\frac{3}{7}$

$6\frac{3}{7}$ is less than $6\frac{1}{2}$, but $6\frac{2}{3}$ is more.

f. $\frac{31}{7} > \frac{32}{8}$

$\frac{32}{8}$ is the same as 4. It would only take $\frac{28}{7}$ to make 4, so $\frac{31}{7}$ must be greater.

g. $\frac{31}{10} < \frac{25}{8}$

$\frac{31}{10}$ is $3\frac{1}{10}$, and $\frac{25}{8}$ is $3\frac{1}{8}$.
 $\frac{1}{8}$ is bigger than $\frac{1}{10}$!

h. $\frac{39}{12} > \frac{19}{6}$

$\frac{39}{12}$ is $3\frac{3}{12}$ and $\frac{19}{6}$ is $3\frac{1}{6}$. They are both close to 3, but $3\frac{3}{12}$ is just like $3\frac{1}{4}$ so it is greater.

i. $\frac{49}{50} < 3\frac{90}{100}$

$\frac{49}{50}$ is not even a whole, but $3\frac{90}{100} = 3 + \frac{90}{100}$ so it is greater.

j. $5\frac{5}{12} < 5\frac{51}{100}$

They both have mixed numbers with a 5, but $\frac{5}{12}$ is less than $\frac{1}{2}$ and $\frac{51}{100}$ is greater than $\frac{1}{2}$, so $5\frac{5}{12} < 5\frac{51}{100}$.

