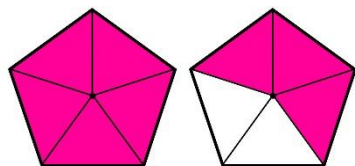# Check Your Answers on Fractions and Mixed Numbers!

A fraction is a ratio that compares the *part* to the *whole*. In the first figure, one whole, all 5 congruent (same shape, same size) sections are shaded. In the second figure, 3 sections are shaded out of 5. Count the number of fifths to produce the improper fraction (the numerator larger than the denominator) and mixed number.

3 congruent sections
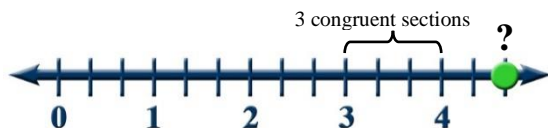
Each segment between numbers is divided into 3 congruent parts, indicating thirds (the fraction's denominator must be 3).

1. $\frac{8}{5}$, $1\frac{3}{5}$

2. $4\frac{2}{3}$, $\frac{14}{3}$

If Sally had 5 whole cookies and ate half of one cookie, there were 4 whole cookies remaining plus 1 half. If Sally had 5 whole cookies, then she had 10 halves. Because she ate one half, there were 9 halves remaining.

3. $4\frac{1}{2}$, $\frac{9}{2}$

To change an improper fraction to a mixed number, divide the numerator (16) by the denominator (3) to produce a whole number (5) and a remainder (1) which becomes the numerator of the fractional part of the mixed number: $16 \div 3 = 5$ with remainder of 1 (numerator of fractional part of number); denominator remains the same (3).

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

5. $\frac{11}{4}$

To change a mixed number to an improper fraction, multiply the whole number (2) by the denominator (4) and add the numerator (3), placing that number over the given denominator (4): $2 \times 4 + 3 = 8 + 3 = 11$

6. $4\frac{1}{5}$

Again, to change an improper fraction to a mixed number, divide the numerator (21) by the denominator (5) to produce a whole number (4) and a remainder (1) which becomes the numerator of the fractional part of the mixed number: $21 \div 5 = 4$ with remainder of 1 (numerator of fractional part of number); denominator remains the same (5).

7. $\frac{29}{6}$

Again, to change a mixed number to an improper fraction, multiply the whole number (4) by the denominator (6) and add the numerator (5), placing that number over the given denominator (6): $4 \times 6 + 5 = 24 + 5 = 29$

8. $4\frac{3}{5} = \frac{23}{5}$

Change each improper fraction to a mixed number to determine if values are equal.

$3\frac{4}{5}$, $\frac{18}{5} = 3\frac{3}{5}$, $\left(4\frac{3}{5}\right)$, $\frac{21}{5} = 4\frac{1}{5}$, $5\frac{3}{5}$ $\left(\frac{23}{5}\right) \neq 4\frac{3}{5}$

9. $\frac{13}{14}$

It is possible to change each improper fraction to a mixed number to determine which value is the smallest. However, on inspection, there is one fraction that is less than 1 which is obviously the correct choice.

10. $\frac{4}{3}$ $\frac{11}{5}$ $\frac{13}{4}$ $\frac{19}{2}$

Change each improper fraction to a mixed number to order the values from smallest to largest.

$\frac{4}{3} = 1\frac{1}{3}$, $\frac{11}{5} = 2\frac{1}{5}$, $\frac{13}{4} = 3\frac{1}{4}$, $\frac{19}{2} = 9\frac{1}{2}$

Perfect score? Yes! You've got this!! You're ready to move on to the next section!!!