Do Now: Complete with < or >

1.) 5/6 $\quad > \quad$ 4/6

2.) 2/3 $\quad < \quad$ 4/3

3.) 15/19 $\quad < \quad$ 16/19

< less than

> greater than

numerator
denominator

18, 20, 48, 49

(18) $\dfrac{1}{3d}$ (48) $-2x^2$

(20) $\dfrac{5}{7z}$ (49) y^2

---

(48)

$$\dfrac{-2x^3}{} = \dfrac{-2x^2}{1} = (-2x^2)$$

(49)

$$\dfrac{5x^2y^2}{5x^2} = 1 \cdot y^2 = (y^2)$$
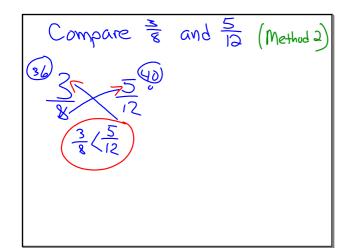

4.5 Comparing Fractions and Mixed Numbers

7.NS
7.EE

- SWBAT compare and order fractions and mixed numbers.
- SWBAT build knowledge through problem solving.
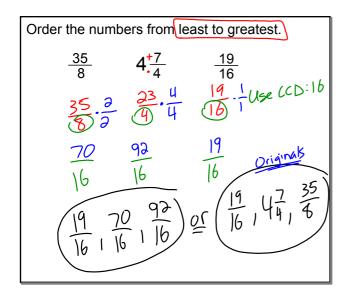
- Calculators: No

Least common denominator (LCD) is the least common multiple of the denominator of two or more fractions.
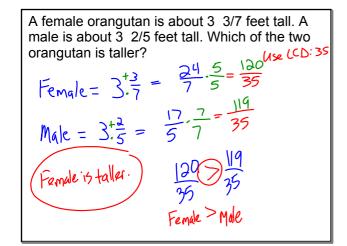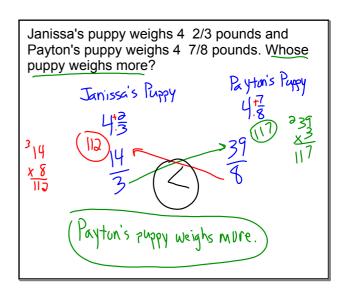

Compare (3/8) and (5/12)

Multiples

$8 = 8, 16, 24, 32, 40, 48, 56, \ldots$

$12 = 12, 24, 36, 48, 60, \ldots$

LCD: 24
CD: 48

$\dfrac{3}{8} \cdot \dfrac{3}{3} = \boxed{\dfrac{9}{24}}$

$\dfrac{5}{12} \cdot \dfrac{2}{2} = \boxed{\dfrac{10}{24}}$

$\dfrac{3}{8}$ and $\dfrac{5}{12}$

$\dfrac{9}{24} < \dfrac{10}{24}$

Compare $\dfrac{3}{8}$ and $\dfrac{5}{12}$ (Method 2)

36   40

$\dfrac{3}{8}$ $\dfrac{5}{12}$

$\dfrac{3}{8} < \dfrac{5}{12}$

Compare (7/10) and (5/6)

$\dfrac{7}{10} < \dfrac{5}{6}$

Order the numbers from least to greatest.

$$\frac{35}{8} \qquad 4\frac{+7}{\cdot 4} \qquad \frac{19}{16}$$

$$\frac{35}{8}\cdot\frac{2}{2} \qquad \frac{23}{4}\cdot\frac{4}{4} \qquad \frac{19}{16}\cdot\frac{1}{1} \text{ Use CCD:16}$$

$$\frac{70}{16} \qquad \frac{92}{16} \qquad \frac{19}{16}$$

Originals

$$\left(\frac{19}{16}, \frac{70}{16}, \frac{92}{16}\right) \text{ or } \left(\frac{19}{16}, 4\frac{7}{4}, \frac{35}{8}\right)$$

Order the numbers from least to greatest.

$$\frac{7}{10} \qquad 2\frac{1}{3} \qquad \frac{5}{6}$$

A female orangutan is about 3 3/7 feet tall. A male is about 3 2/5 feet tall. Which of the two orangutan is taller?

Use CCD: 35

$$\text{Female} = 3\frac{+3}{\cdot 7} = \frac{24}{7}\cdot\frac{5}{5} = \frac{120}{35}$$

$$\text{Male} = 3\frac{+2}{\cdot 5} = \frac{17}{5}\cdot\frac{7}{7} = \frac{119}{35}$$

Female is taller.

$$\frac{120}{35} > \frac{119}{35}$$

Female > Male

Janissa's puppy weighs 4 2/3 pounds and Payton's puppy weighs 4 7/8 pounds. Whose puppy weighs more?

Janissa's Puppy

$$4\frac{+2}{\cdot 3}$$

$$\begin{array}{c}3\,14\\ \times 8\\ \hline 112\end{array}$$

$$\frac{112}{14} \quad \frac{14}{3}$$

Payton's Puppy

$$4\frac{+7}{\cdot 8}$$

$$\frac{117}{} \quad \begin{array}{c}^{2}39\\ \times 3\\ \hline 117\end{array}$$

$$\frac{39}{8}$$

$$< $$

Payton's puppy weighs more.

Exit Pass 4.5

Copy and complete the statement with <, >, or =.

1. 2 2/3 _____=_____ 16/6

2. 12/17 _____>_____ 30/51

3. Explain how comparing fractions with like denominators differs from comparing fractions with unlike denominators.

"Don't blame the sea if you cannot catch a fish."

Working individually or with a partner, complete the workbook.

Workbook pg.

Reflection of Today's Lesson

**4.5 Comparing Fractions
and Mixed Numbers**

7.NS
7.EE

- SWBAT compare and order fractions and mixed numbers.
- SWBAT build knowledge through problem solving.

• Calculators: No

Homework

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