$$\frac{2}{3} \;,\; \frac{3}{7} \qquad LCM$$

Multiples of 3 → 3, 6, 9, 12, 15, 18, (21), 24, 27, ...
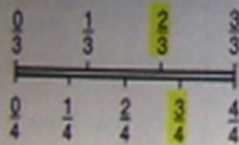
Multiples of 7 → 7, 14, (21), 28, ...

LCM 3 an 7 is 21

$$\frac{2^{\times 7}}{3_{\times 7}} = \frac{14}{21} \;>\; \frac{3^{\times 3}}{7_{\times 3}} = \frac{9}{21}$$

Lisette and Kim are the same height. Lisette can jump $\frac{2}{3}$ of her height and Kim, $\frac{3}{4}$ of her height. Who can jump higher?

Number lines can be used to compare $\frac{2}{3}$ and $\frac{3}{4}$.

$\frac{3}{4}$ is to the right of $\frac{2}{3}$. $\frac{3}{4} > \frac{2}{3}$

Fractions can also be compared if they have the same denominator.

For $\frac{3}{4}$ and $\frac{2}{3}$, the LCM of the denominators is 12.

The LCM is used to write equivalent fractions.

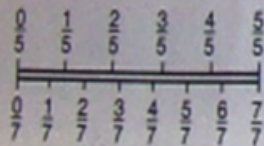$\frac{9}{12} > \frac{8}{12}$, therefore $\frac{3}{4} > \frac{2}{3}$.

$$\frac{3}{4} = \frac{9}{12} \quad (\times 3)$$

$$\frac{2}{3} = \frac{8}{12} \quad (\times 4)$$

Kim can jump higher.

You Try

1. Which is greater, $\frac{4}{5}$ or $\frac{5}{7}$?

2. Find the LCM of the denominators (the least common denominator).

    a. $\frac{2}{3}, \frac{1}{7}$ **b.** $\frac{2}{5}, \frac{1}{2}$

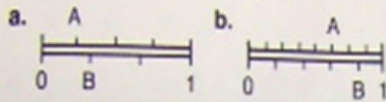   **c.** $\frac{1}{9}, \frac{1}{6}$ **d.** $\frac{3}{4}, \frac{5}{6}$

3. Copy and use > or < to make a true statement.

    a. $\frac{3}{5} \bigcirc \frac{2}{5}$ **b.** $\frac{7}{10} \bigcirc \frac{9}{10}$ **c.** $\frac{1}{5} \bigcirc \frac{3}{10}$

    d. $\frac{5}{8} \bigcirc \frac{3}{4}$ **e.** $\frac{1}{4} \bigcirc \frac{1}{3}$ **f.** $\frac{3}{4} \bigcirc \frac{7}{10}$

4. Arrange from least to greatest.

    a. $\frac{3}{10}, \frac{1}{10}, \frac{9}{10}, \frac{7}{10}$ **b.** $\frac{7}{9}, \frac{18}{18}, \frac{4}{9}, \frac{11}{18}, \frac{1}{18}$

    c. $\frac{1}{4}, \frac{2}{3}, \frac{1}{12}$ **d.** $\frac{2}{3}, \frac{3}{4}, \frac{1}{2}, \frac{5}{6}$

    e. $\frac{11}{10}, \frac{6}{5}, \frac{9}{8}$

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1. What fractions do A and B represent?

   a. A
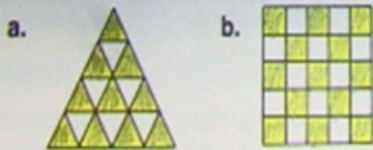
   0 B   1

   b. A

   0   B 1

2. Which is the lesser fraction in each part of exercise 1?

3. Which is the greater fraction?

   a. $\frac{4}{12}, \frac{5}{12}$ b. $\frac{3}{4}, \frac{5}{8}$ c. $\frac{12}{5}, \frac{9}{4}$

   d. $\frac{7}{8}, \frac{3}{4}$ e. $\frac{15}{10}, \frac{15}{8}$ f. $\frac{2}{3}, \frac{7}{10}$

4. Which figure has the greater fraction of its area shaded?

   a.   b.

5. Renata and Bonnie have the same mass. Renata can lift $\frac{4}{5}$ of her mass. Bonnie can lift $\frac{3}{4}$ of her mass. Who can lift the greater mass?

6. Find the LCM of the denominators.

   a. $\frac{1}{2}, \frac{4}{5}, \frac{9}{10}$ b. $\frac{7}{8}, \frac{1}{3}, \frac{5}{4}$ c. $\frac{7}{6}, \frac{3}{8}, \frac{5}{3}$

7. Which is the least fraction?

   a. $\frac{2}{3}, \frac{5}{6}, \frac{3}{4}$ b. $\frac{7}{8}, \frac{4}{5}, \frac{9}{10}$ c. $\frac{7}{4}, \frac{11}{7}, \frac{3}{2}$

8. Arrange from least to greatest.

   a. $\frac{3}{4}, \frac{8}{4}, \frac{5}{4}$ b. $\frac{1}{3}, \frac{2}{5}, \frac{1}{10}$

   c. $\frac{8}{5}, \frac{9}{5}, \frac{5}{5}$ d. $\frac{9}{4}, \frac{7}{2}, 2$

9. Of the 30 students in Mrs. Paolucci's class, 3 were absent. On the same day, 2 students were absent from Mr. Clark's class of 25. Which class had the greater fraction of students present?

10. A construction company is building Phase II of a housing development. Of the 30 homes in Phase I, 11 have three bedrooms. In Phase II, 17 of the 45 homes have three bedrooms. Which phase has the greater fraction of three-bedroom homes?

11. While playing golf, Neil lost 3 of his 10 golf balls. Gabrielle lost 6 of her 15 golf balls. Which player lost the lesser fraction of golf balls?

12. The Yost family spent $72 of their $264 weekly income on food. The Seymours spent $93 of their $330 weekly income on food.

   a. How much did each family spend on food in a year?

   b. Which family spent the greater fraction of their income on food?