Exercise 5

Comparing and Ordering Fractions

Compare and order fractions by finding a common denominator. The larger fraction will have the larger numerator.

Which is smaller, $\frac{1}{3}$ or $\frac{1}{2}$?

Find the LCD of 3 and 2. 6

Raise to higher terms. $\frac{1}{3} = \frac{2}{6}$ $\frac{1}{2} = \frac{3}{6}$

Compare. $\frac{2}{6} < \frac{3}{6}$

$\frac{1}{3}$ is smaller than $\frac{1}{2}$.

Arrange $\frac{5}{12}$, $\frac{3}{4}$, and $\frac{2}{3}$ in order from smallest to largest.

Find the LCD of 12, 4, and 3. 12

Raise to higher terms. $\frac{5}{12} = \frac{5}{12}$ $\frac{3}{4} = \frac{9}{12}$ $\frac{2}{3} = \frac{8}{12}$

Order the fractions. $\frac{5}{12}, \frac{8}{12}, \frac{9}{12}$

From smallest to largest: $\frac{5}{12}, \frac{2}{3}, \frac{3}{4}$

Circle the larger fraction in each pair.

1. $\frac{6}{10}$ or $\frac{12}{16}$ **2.** $\frac{1}{12}$ or $\frac{2}{3}$ **3.** $\frac{1}{8}$ or $\frac{3}{4}$ **4.** $\frac{3}{5}$ or $\frac{1}{10}$

5. $\frac{3}{10}$ or $\frac{2}{5}$ **6.** $\frac{1}{3}$ or $\frac{1}{4}$ **7.** $\frac{7}{8}$ or $\frac{1}{16}$ **8.** $\frac{3}{16}$ or $\frac{1}{8}$

9. $\frac{1}{3}$ or $\frac{7}{15}$ **10.** $\frac{1}{7}$ or $\frac{2}{9}$ **11.** $\frac{5}{8}$ or $\frac{2}{3}$ **12.** $\frac{2}{3}$ or $\frac{1}{2}$

Arrange the fractions in each set from smallest to largest.

13. $\frac{2}{3}, \frac{2}{6}, \frac{2}{4}$ **14.** $\frac{3}{5}, \frac{3}{15}, \frac{1}{10}$ **15.** $\frac{1}{2}, \frac{3}{7}, \frac{9}{14}$ **16.** $\frac{1}{3}, \frac{1}{4}, \frac{5}{12}, \frac{7}{24}$

Solve.

17. A garage mechanic wants to arrange his socket wrenches from smallest to largest. The sizes are $\frac{3}{4}$ in., $\frac{1}{8}$ in., $\frac{1}{2}$ in., $\frac{3}{16}$ in., and $\frac{1}{3}$ in.

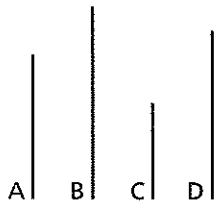
In what order should the mechanic arrange the wrenches? _____

Directions: Choose the one best answer to each item. Circle the number of the correct answer.

18. On the assembly line, Kara cut three strips of rubber. They were $\frac{2}{3}$ yard, $\frac{6}{8}$ yard, and $\frac{5}{6}$ yard long. She arranged them in order, from shortest to longest. What was the order of the rubber strips?

(1) $\frac{6}{8}, \frac{5}{6}, \frac{2}{3}$
(2) $\frac{2}{3}, \frac{5}{6}, \frac{6}{8}$
(3) $\frac{5}{6}, \frac{6}{8}, \frac{2}{3}$
(4) $\frac{2}{3}, \frac{6}{8}, \frac{5}{6}$
(5) $\frac{6}{8}, \frac{2}{3}, \frac{5}{6}$

Items 19 and 20 refer to the following information.



19. What is the order of the lines from smallest to longest?

(1) B, A, C, D
(2) B, D, A, C
(3) C, A, D, B
(4) C, B, A, D
(5) D, C, B, A

20. What is the least common denominator of the fractional lengths if the lines measure $\frac{3}{4}$ in., 1 in., $\frac{1}{2}$ in., and $\frac{7}{8}$ in.?

(1) 16
(2) 8
(3) 6
(4) 4
(5) 2

21. A manager at a supermarket wants to arrange three packages of frozen vegetables from smallest to largest. One package is $\frac{3}{16}$ pound, one is $\frac{7}{8}$ pound, and another is $\frac{3}{4}$ pound. What is the least common denominator the manager can use to arrange the packages from smallest to largest?

(1) 4
(2) 8
(3) 16
(4) 24
(5) 32

22. In item 21, how should the manager arrange the packages from smallest to largest?

(1) $\frac{3}{16}, \frac{3}{4}, \frac{7}{8}$
(2) $\frac{3}{16}, \frac{7}{8}, \frac{3}{4}$
(3) $\frac{3}{4}, \frac{7}{8}, \frac{3}{16}$
(4) $\frac{3}{4}, \frac{3}{16}, \frac{7}{8}$
(5) $\frac{7}{8}, \frac{3}{4}, \frac{3}{16}$

23. Roberto walks $\frac{7}{10}$ mile to school every day, Kim walks $\frac{1}{5}$ mile, Carol walks $\frac{5}{6}$ mile, and Luis walks $\frac{1}{2}$ mile. How would you arrange the distances they walk each day from the longest to the shortest?

(1) $\frac{1}{2}, \frac{1}{5}, \frac{7}{10}, \frac{5}{6}$
(2) $\frac{1}{2}, \frac{7}{10}, \frac{5}{6}, \frac{1}{5}$
(3) $\frac{5}{6}, \frac{7}{10}, \frac{1}{2}, \frac{1}{5}$
(4) $\frac{1}{5}, \frac{1}{2}, \frac{7}{10}, \frac{5}{6}$
(5) $\frac{7}{10}, \frac{1}{2}, \frac{5}{6}, \frac{1}{5}$

24. In item 23, who walks the least amount of miles to school?

(1) Roberto
(2) Kim
(3) Carol
(4) Luis
(5) both Roberto and Luis