Exercise 10 Adding Unlike Fractions and Mixed Numbers

Unlike fractions have different denominators. Add unlike fractions and mixed numbers by finding a common denominator. Regroup, if needed.

Add. $\frac{1}{3} + \frac{2}{9}$ **Rewrite the fractions using the LCD.** $\frac{1}{3} \rightarrow \frac{3}{9}$

$\frac{2}{9} \rightarrow \frac{2}{9}$

Add the numerators. $\frac{3+2}{9} = \frac{5}{9}$

Add. $2\frac{1}{3} + 1\frac{3}{4}$ **Rewrite the fractions using the LCD.** $2\frac{1}{3} \rightarrow 2\frac{4}{12}$

$1\frac{3}{4} \rightarrow 1\frac{9}{12}$

Add the whole numbers. $2\frac{4}{12}$

Add the fractions. $+ 1\frac{9}{12}$

Regroup the improper fraction. $3\frac{13}{12} = 4\frac{1}{12}$

Add the fractions. Reduce your answer to lowest terms.

1. $\frac{1}{2} + \frac{1}{3} =$ **2.** $\frac{7}{8} + \frac{3}{4} =$ **3.** $\frac{5}{6} + \frac{3}{8} =$ **4.** $\frac{3}{5} + \frac{6}{7} =$

5. $\frac{4}{6} + \frac{4}{5} =$ **6.** $\frac{4}{10} + \frac{1}{5} =$ **7.** $\frac{2}{12} + \frac{1}{9} =$ **8.** $\frac{2}{3} + \frac{3}{8} =$

Add the mixed numbers. Reduce your answer to lowest terms.

9. $4\frac{1}{3} + 3\frac{3}{4}$ **10.** $7\frac{8}{9} + 3\frac{4}{5}$ **11.** $12\frac{4}{6} + 5\frac{1}{2}$ **12.** $35\frac{9}{10} + 23\frac{1}{2}$ **13.** $44\frac{1}{8} + 9\frac{5}{8}$

Solve.

14. Clark is buying fabric to make banners for a political event. One banner requires $5\frac{1}{4}$ yards of fabric. The other requires $4\frac{7}{8}$ yards of fabric.

How much total fabric does he need to buy? _____

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

15. Ron worked for $1\frac{1}{4}$ hours on Monday, 2 hours on Tuesday, and $2\frac{1}{2}$ hours on Wednesday. How many total hours did Ron do yardwork in the three days?

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

16. Sara's report had $4\frac{7}{8}$ pages of writing and $2\frac{1}{3}$ pages of diagrams. How long was Sara's total report?

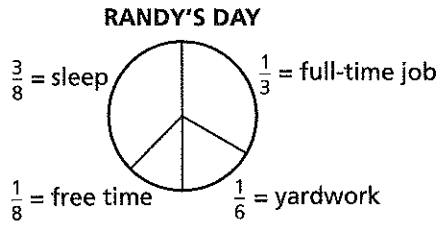
(1) $6\frac{8}{11}$ pages
(2) $2\frac{13}{25}$ pages
(3) $7\frac{5}{24}$ pages
(4) $6\frac{8}{24}$ pages
(5) none of the above

17. Look at the rainfall totals in the table. What was the total rainfall for this five-day period?

DAY	RAINFALL
Monday	$\frac{1}{4}$ inch
Tuesday	$\frac{1}{2}$ inch
Wednesday	$\frac{7}{8}$ inch
Thursday	$\frac{3}{8}$ inch
Friday	$\frac{3}{4}$ inch

(1) $2\frac{3}{4}$ inches
(2) $2\frac{1}{2}$ inches
(3) 3 inches
(4) $3\frac{1}{2}$ inches
(5) none of the above

Items 18 through 21 refer to the following.



18. What fraction of Randy's day is spent doing yardwork and sleeping?

(1) $\frac{4}{14}$
(2) $\frac{13}{24}$
(3) $\frac{1}{2}$
(4) $\frac{4}{8}$
(5) $\frac{4}{6}$

19. What fraction of the day does Randy spend at his job and doing yardwork?

(1) $\frac{2}{9}$
(2) $\frac{2}{3}$
(3) $\frac{2}{6}$
(4) $\frac{1}{2}$
(5) $\frac{4}{5}$

20. What fraction of the day does Randy do everything but enjoy free time?

(1) $\frac{8}{8}$
(2) $\frac{7}{8}$
(3) $\frac{9}{24}$
(4) $\frac{8}{24}$
(5) $\frac{4}{24}$

21. What fraction of the day does Randy spend sleeping and enjoying free time?

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