

0522 Grade 6 Math Roy
(Self-Study/ Homework)

Answer Key to Exercises

Go Math!

Lesson 6.6

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Unlock the Problem

addition

no

- STEP 1** Estimate the sum. $2 + 2 = 4$
-
- STEP 2** Find a common denominator. Use the common denominator to write equivalent fractions with like denominators.
-
- STEP 3** Add the fractions. Then add the whole numbers. Write the answer in simplest form.

$$\begin{array}{r} 1\frac{4}{5} = 1\frac{8}{10} \\ + 2\frac{1}{10} = + 2\frac{1}{10} \\ \hline 3\frac{9}{10} \end{array}$$

So, Denise mixed $3\frac{9}{10}$ ounces of paint.

- 1.) I can compare my answer to the estimate. Since $3\frac{9}{10}$ is close to the estimate, 4, the answer is reasonable.
- 2.) Possible answer: 50

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- STEP 1** Estimate the difference. $5 - 3 = 2$
-
- STEP 2** Find a common denominator. Use the common denominator to write equivalent fractions with like denominators.
-
- STEP 3** Subtract the fractions. Subtract the whole numbers. Write the answer in simplest form.

$$\begin{array}{r} 4\frac{5}{6} = 4\frac{20}{24} \\ - 2\frac{3}{4} = - 2\frac{18}{24} \\ \hline 2\frac{2}{24} = 2\frac{1}{12} \end{array}$$

- 3.) I can compare my answer to the estimate. Since $2\frac{1}{2}$ is close to the estimate, 2, the answer is reasonable.

Share and Show

1.)

$$\begin{array}{r} 7\frac{2}{5} = 7\frac{8}{20} \\ + 4\frac{3}{4} = + 4\frac{15}{20} \\ \hline 11\frac{23}{20} = 12\frac{3}{20} \end{array}$$

2.) $6\frac{1}{20}$

3.) $7\frac{1}{12}$

4.) $6\frac{1}{10}$

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5.) $7\frac{1}{2}$

6.) $1\frac{7}{18}$

7.) $4\frac{1}{2}$

8.) $3\frac{7}{10}$

9.) $15\frac{13}{24}$

10.) $4\frac{5}{6}$

11.) $6\frac{7}{12}$

12.) $1\frac{3}{8}$

13.) $9\frac{1}{3}$

14.) $5\frac{7}{12}$

15.) $15\frac{1}{10}$

16.) $6\frac{13}{18}$

17.) $4\frac{1}{24}$

18.) $2\frac{1}{2}$

19.) $4\frac{4}{21}$

20.) $2\frac{3}{8}$

21.) $3\frac{13}{36}$

22.) $6\frac{11}{24}$ fluid ounces

23.) $2\frac{1}{12}$ hours

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24.) No, Gavin's expectation is not reasonable. If you estimate the amount of Tangerine paint made, $4 + 2\frac{1}{2} = 6\frac{1}{2}$, the estimate is not close to Gavin's answer.

25.) $3\frac{9}{10}$ oz of red from Tangerine and $5\frac{5}{6}$ oz of yellow from Mango; I looked for the greatest number in each column for colors. Since the numbers in the two columns for Mango are the same, I looked for the next greatest number.

- 26.) a. True
b. True
c. True
d. False

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2.) $4\frac{1}{12}$

3.) $6\frac{11}{24}$

4.) $11\frac{1}{2}$

5.) $3\frac{13}{20}$

6.) $3\frac{5}{18}$

7.) $5\frac{1}{8}$

8.) $3\frac{8}{35}$

9.) $6\frac{1}{4}$ pounds

10.) $15\frac{21}{40}$ miles

- 11.) Sample answer:

Mickey rode his bicycle $1\frac{3}{8}$ kilometers from his house to the park. Then he rode $3\frac{1}{4}$ kilometers from the park to the library. How many kilometers did Mickey ride in all?

Solution: $1\frac{3}{8} + 3\frac{1}{4} = 1\frac{3}{8} + 3\frac{2}{8} = 4\frac{5}{8}$

Answer: $4\frac{5}{8}$ kilometers

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1.) $1\frac{1}{16}$ miles

2.) $5\frac{19}{20}$ pounds

3.) 25 rows

4.) about 200 people

5.) 30

6.) 0.014

Lesson 6.7

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Unlock the Problem

subtraction

STEP 1 Estimate the difference. $2\frac{1}{2} - 2 = \frac{1}{2}$

STEP 2 Find a common denominator. Use the common denominator to write equivalent fractions with like denominators.

STEP 3 Since $\frac{6}{12}$ is less than $\frac{10}{12}$, rename $2\frac{6}{12}$ as a mixed number with a fraction greater than 1.

Think: $2\frac{6}{12} = 1 + 1 + \frac{6}{12} = 1 + \frac{12}{12} + \frac{6}{12} = 1\frac{18}{12}$

$$2\frac{6}{12} = 1\frac{18}{12}$$

$$\begin{array}{r} 2\frac{1}{2} = 2\frac{6}{12} = 1\frac{18}{12} \\ -1\frac{5}{6} = -1\frac{10}{12} = -1\frac{10}{12} \\ \hline \frac{8}{12} = \frac{2}{3} \end{array}$$

STEP 4 Find the difference of the fractions. Then find the difference of the whole numbers. Write the answer in simplest form. Check to make sure your answer is reasonable.

So, Kara has $\frac{2}{3}$ mile left to run.

Explain

It is important to write equivalent fractions first to determine if renaming is needed.

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STEP 1 Write equivalent fractions, using a common denominator.

A common denominator of $\frac{1}{2}$ and $\frac{5}{6}$ is 6.

$$\begin{array}{l} 2\frac{1}{2} \rightarrow 2\frac{3}{6} \\ 1\frac{5}{6} \rightarrow 1\frac{5}{6} \end{array}$$

STEP 2 Rename both mixed numbers as fractions greater than 1.

$$\begin{array}{l} 2\frac{3}{6} = \frac{15}{6} \quad \text{Think: } \frac{6}{6} + \frac{6}{6} + \frac{3}{6} \\ 1\frac{5}{6} = \frac{11}{6} \quad \text{Think: } \frac{6}{6} + \frac{5}{6} \end{array}$$

STEP 3 Find the difference of the fractions. Then write the answer in simplest form.

$$\begin{array}{r} \frac{15}{6} - \frac{11}{6} = \frac{4}{6} \\ = \frac{2}{3} \end{array}$$

$$2\frac{1}{2} - 1\frac{5}{6} = \frac{2}{3}$$

1.) Estimate: $4\frac{1}{2} - 4 = \frac{1}{2}$ $\frac{7}{10}$

2.) Estimate: $9 - 3 = 6$ $6\frac{5}{12}$

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3.) Estimate: $3\frac{1}{2} - 2 = 1\frac{1}{2}$ $1\frac{3}{4}$

4.) Estimate: $4 - 2\frac{1}{2} = 1\frac{1}{2}$ $1\frac{11}{12}$

5.) Estimate: $5\frac{1}{2} - 1\frac{1}{2} = 4$ $3\frac{9}{10}$

6.) $7\frac{4}{9}$

7.) $2\frac{1}{2}$

8.) $\frac{7}{8}$

9.) $5\frac{13}{24}$

10.) $\frac{7}{10}$

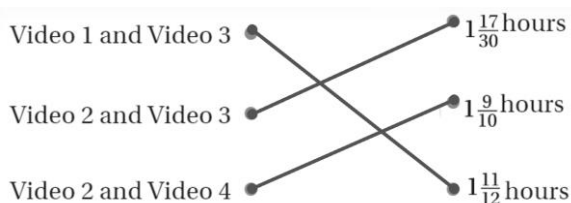
11.) $9\frac{11}{30}$

12.) $6\frac{13}{20}$

13.) $4\frac{43}{72}$

14.) $1\frac{7}{30}$ minutes

15.)



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16.) There are 3 trains with 8 rows per train. Riders stand in rows of 4. A total of $7\frac{1}{4}$ rows were filled on the first train, all 8 rows on the second, and $5\frac{1}{2}$ rows on the third train.

17.) $7\frac{1}{4} - 5\frac{1}{2} = 1\frac{3}{4}$. So, $1\frac{3}{4}$ more rows were filled on the first train than on the third train.

18.) $\frac{3}{4}$ empty row; 3 riders. $8 - 7\frac{1}{4} = \frac{3}{4}$. Since there are 4 riders in each row and $\frac{3}{4}$ of the row is empty, 3 riders are needed.

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- 1.) Estimate: $6\frac{1}{2} - 1\frac{1}{2} = 5$ $4\frac{14}{15}$ 4.) Estimate: $2 - 1 = 1$ $\frac{37}{42}$
- 2.) Estimate: $4\frac{1}{2} - 4 = \frac{1}{2}$ $\frac{2}{3}$ 5.) Estimate: $8 - 6 = 2$ $1\frac{8}{9}$
- 3.) Estimate: $9 - 4 = 5$ $5\frac{1}{8}$ 6.) Estimate: $9 - 3\frac{1}{2} = 5\frac{1}{2}$ $5\frac{7}{12}$
- 7.) $2\frac{9}{16}$ yards
- 8.) $2\frac{15}{16}$ pounds
- 9.) Sample Answer:
- $$\begin{aligned} 5\frac{1}{6} - 2\frac{1}{2} &= 5\frac{1}{6} - 2\frac{3}{6} \\ &= \left(4 + \frac{6}{6} + \frac{1}{6}\right) - 2\frac{3}{6} \\ &= 4\frac{7}{6} - 2\frac{3}{6} \\ &= 2\frac{4}{6} \\ &= 2\frac{2}{3} \end{aligned}$$

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- 1.) $2\frac{13}{24}$ bushels 2.) $5\frac{3}{4}$ cups 4.) 34 cars
- 3.) 5 hours 5.) 500,000,115
- 6.) 21.3

Homework

Completed by May 29th

Go Math!

- p. 397, numbers 5 to 8, 10.
- p. 399, numbers 1 to 8.
- p. 400, numbers 1 to 6.

Completed by June 1st

Go Math!

- p. 404, numbers 5 to 6.
- p. 405, numbers 1 to 5.
- p. 406, numbers 1 to 6.