

Name \_\_\_\_\_

1. Estimate the sum of  $\frac{9}{10}$  and  $\frac{5}{6}$ . Write an equation. **2 points**

**2;  $\frac{9}{10}$  is close to 1 and  $\frac{5}{6}$  is close to 1.  $1 + 1 = 2$**

2. Select all of the expressions that are equal to  $\frac{3}{4}$ . Explain. **1 point**

- $\frac{7}{20} + \frac{2}{5}$ ; I found a common denominator and then added the numerators to get  $\frac{3}{4}$ .
- $\frac{19}{20} - \frac{1}{5}$ ; I found a common denominator and then subtracted the numerators to get  $\frac{3}{4}$ .
- $\frac{5}{17} - \frac{2}{13}$ ; I subtracted the numerators and denominators to get  $\frac{3}{4}$ .
- $2 + 1\frac{1}{3}$ ; I found a common denominator and then added the numerators to get  $\frac{3}{4}$ .
- $3\frac{4}{7} - \frac{9}{10}$ ; I found a common denominator and then subtracted the numerators to get  $\frac{3}{4}$ .

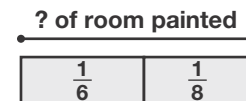
3. Elizabeth has two ribbons. One is  $\frac{1}{7}$  foot long, and the other is  $\frac{2}{5}$  foot long. Write  $\frac{1}{7}$  and  $\frac{2}{5}$  using a common denominator. What fraction represents the total length of ribbon Elizabeth has? **2 points**

**Sample answer:  $\frac{5}{35}$  and  $\frac{14}{35}$ ;  $\frac{19}{35}$  foot**

4. Tristan had  $\frac{1}{3}$  pound of grapes at home. He went to the store and bought  $\frac{3}{8}$  pound of grapes. What fraction of a pound of grapes does Tristan have now? Explain. **2 points**

**$\frac{17}{24}$  of a pound; Sample answer: I found the common denominator of the fractions and renamed the fractions as  $\frac{8}{24}$  and  $\frac{9}{24}$ .**

5. The bar diagram shows the fractional parts of a room that Andrea and Yeo painted.



- A. Rename each fraction using a common denominator. **1 point**

**Sample answer:  $\frac{4}{24}$  and  $\frac{3}{24}$**

- B. Use the renamed fractions to write and solve an equation to find the total amount of the room Andrea and Yeo painted. **2 points**

**Sample answer:  $\frac{7}{24}$  of the room;  $\frac{4}{24} + \frac{3}{24} = \frac{7}{24}$**

6. Choose the correct sum for each expression. **1 point**

|                               | $\frac{7}{8}$                       | $1\frac{1}{16}$                     | $\frac{5}{8}$                       | $\frac{7}{16}$                      |
|-------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| $\frac{1}{8} + \frac{3}{4}$   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |
| $\frac{1}{8} + \frac{1}{2}$   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| $\frac{1}{8} + \frac{5}{16}$  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| $\frac{1}{8} + \frac{15}{16}$ | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |

7. For a trip to the beach, Kelly drove for  $\frac{5}{6}$  hour and Joshua drove for  $\frac{2}{5}$  hour.
- A. Estimate how much longer Kelly drove than Joshua. Explain how you found your estimate. **2 points**

**Sample answer:  $\frac{1}{2}$  hour;**  
 $\frac{5}{6}$  is close to 1 hour and  
 $\frac{2}{5}$  is close to  $\frac{1}{2}$ ;  $1 - \frac{1}{2} = \frac{1}{2}$

- B. How much longer did Kelly drive than Joshua? Find the exact amount. **1 point**

**$\frac{13}{30}$  hour**

8. Cassidy had  $8\frac{7}{10}$  inches of string. She used  $5\frac{3}{8}$  inches of string. Estimate the amount of string Cassidy has left. **1 point**
- (A) 2 inches                      (C) 3 inches  
 (B) 4 inches                      (D) 5 inches

9. Explain why you must rename  $10\frac{3}{5}$  in order to find  $10\frac{3}{5} - \frac{6}{7}$ . **1 point**

**Sample Answer: You cannot subtract  $\frac{6}{7}$  from  $\frac{3}{5}$ . Notice that  $\frac{6}{7} = \frac{30}{35}$ , and  $\frac{21}{35} < \frac{30}{35}$ .**

10. Laquita had  $5\frac{7}{9}$  yards of fabric. She used  $3\frac{2}{3}$  to make a blouse. Write and solve an expression to find how much fabric is left. **2 points**

**$2\frac{1}{9}$  yards;  $5\frac{7}{9} - 3\frac{2}{3} = 2\frac{1}{9}$**

11. Valentino needs  $4\frac{1}{2}$  pounds of chicken for a recipe. He already has  $2\frac{3}{4}$  pounds of chicken. How many more pounds of chicken does Valentino need? Identify which equation represents the problem and solve. **1 point**

- (A)  $\frac{3}{4}$  pound;  $4\frac{1}{2} - 2\frac{3}{4} = \frac{3}{4}$   
 (B)  $1\frac{1}{2}$  pounds;  $4\frac{1}{2} - 2\frac{3}{4} = 1\frac{1}{2}$   
 (C)  $1\frac{3}{4}$  pounds;  $4\frac{1}{2} - 2\frac{3}{4} = 1\frac{3}{4}$   
 (D)  $2\frac{3}{4}$  pounds;  $4\frac{1}{2} + 2\frac{3}{4} = 2\frac{3}{4}$

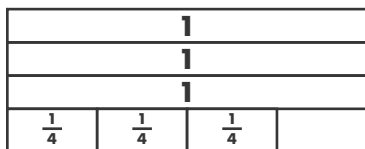
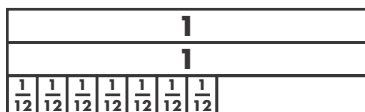
12. For an industrial arts class, Talia used  $\frac{1}{3}$  of a piece of wood for the base of her project,  $\frac{1}{4}$  of the piece of wood for a vertical support, and the rest for a horizontal support. What fraction of the piece of wood did Talia use as a horizontal support? **1 point**

**$\frac{5}{12}$  of the wood**

13. For an Earth Day project, Rushdi collected  $7\frac{5}{8}$  pounds of recyclables, Lydia collected  $9\frac{2}{3}$  pounds of recyclables, and Latrelle collected  $10\frac{3}{4}$  pounds of recyclables. How many pounds of recyclables did the three friends collect in all? **1 point**

- Ⓐ  $26\frac{3}{16}$  pounds      Ⓒ  $28\frac{3}{16}$  pounds  
 Ⓑ  $26\frac{1}{24}$  pounds      Ⓓ  $28\frac{1}{24}$  pounds

14. The fraction strips below can be used to find the sum of two mixed numbers. What is the sum? What is the difference? Show your work. **3 points**



$6\frac{1}{3}; 2\frac{7}{12} + 3\frac{3}{4} = 2\frac{7}{12} + 3\frac{9}{12} = 5\frac{16}{12} = 6\frac{4}{12} = 6\frac{1}{3};$   
 $1\frac{1}{6}; 3\frac{3}{4} - 2\frac{7}{12} = 3\frac{9}{12} - 2\frac{7}{12} = 1\frac{2}{12} = 1\frac{1}{6}$

15. Estimate the sum of  $2\frac{7}{9}$  and  $2\frac{3}{4}$ . Explain how you found your estimate. **2 points**

**$6$ ;  $2\frac{7}{9}$  is close to 3, and  $2\frac{3}{4}$  is close to 3.**

16. Find  $3\frac{3}{4} - \frac{7}{8}$ .

- A. Explain why you must rename  $3\frac{3}{4}$  in order to do the subtraction. **1 point**

**You cannot subtract  $\frac{7}{8}$  from  $\frac{3}{4}$ .  $\frac{3}{4} = \frac{6}{8}$  and  $\frac{7}{8} > \frac{6}{8}$ .**

- B. Explain how to rename  $3\frac{3}{4}$  in order to do the subtraction. **1 point**

**$3\frac{3}{4} = 3\frac{6}{8}$ . Since  $\frac{8}{8} = 1$ ,  $3\frac{6}{8} = 2\frac{14}{8}$ .**

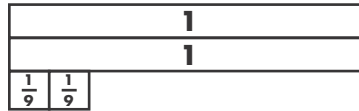
17. Hugo made a triangle pendant with all three sides the same length,  $1\frac{1}{3}$  in. What is the perimeter of the triangle? **1 point**

- A 4 in.
- B 5 in.
- C  $5\frac{1}{3}$  in.
- D  $4\frac{1}{3}$  in.

18. A carpenter needs a board that is  $9\frac{2}{3}$  feet long. He has a board that is  $12\frac{3}{4}$  feet long. How much of the board must the carpenter cut off? If the carpenter wants another piece of wood that is  $2\frac{3}{4}$  feet long, how much of the board must the carpenter cut off of the board that is remaining? **2 points**

**$3\frac{1}{12}$  feet;  $\frac{1}{3}$  foot**

19. Fraction strips for two mixed numbers are shown below. What is the sum of the numbers? What is the difference? Show your work. **3 points**



$$3\frac{7}{9}; 1\frac{5}{9} + 2\frac{2}{9} = 3\frac{7}{9};$$

$$\frac{2}{3}; 2\frac{2}{9} - 1\frac{5}{9} = \frac{6}{9} = \frac{2}{3}$$

20. Noriko says that the expression  $(5\frac{4}{8} + 7\frac{3}{4}) - 4\frac{2}{4}$  is equal to a whole number. Do you agree? Explain. **2 points**

**No; Since**

$$\begin{aligned} 5\frac{4}{8} &= 5\frac{2}{4}, \quad (5\frac{4}{8} + 7\frac{3}{4}) - 4\frac{2}{4} \\ &= (5\frac{2}{4} + 7\frac{3}{4}) - 4\frac{2}{4} \\ &= 12\frac{5}{4} - 4\frac{2}{4} = 8\frac{3}{4} \end{aligned}$$