



SKILL 1: Estimating Sums and Differences

To estimate sums and differences of fractions and mixed numbers, round fractions to the nearest whole number. If the fraction is greater than or equal to $\frac{1}{2}$, round the fraction to 1. If it is not, round the fraction to 0.

Example 1

Estimate: $\frac{7}{12} + \frac{1}{4}$.

Compare each fraction to $\frac{1}{2}$.

$$\frac{7}{12} \geq \frac{1}{2}$$

$$\frac{1}{4} < \frac{1}{2}$$

Round each fraction to either 0 or 1.

$$\frac{7}{12} \text{ rounds to } 1.$$

$$\frac{1}{4} \text{ rounds to } 0.$$

Add.

$$1$$

$$+ 0$$

$$1$$

So, $\frac{7}{12} + \frac{1}{4}$ is about 1.

Example 2

Estimate: $3\frac{8}{15} - 1\frac{5}{6}$.

Compare each fraction to $\frac{1}{2}$.

$$\frac{8}{15} \geq \frac{1}{2}$$

$$\frac{5}{6} \geq \frac{1}{2}$$

Round each fraction to either 0 or 1.

$$\frac{8}{15} \text{ rounds to } 1.$$

$$\frac{5}{6} \text{ rounds to } 1.$$

Add the rounded fraction to the whole number.

$$3 + 1 = 4$$

$$1 + 1 = 2$$

Subtract.

$$4$$

$$- 2$$

$$2$$

So, $3\frac{8}{15} - 1\frac{5}{6}$ is about 2.

Guided Practice.

Estimate. Remember \geq means "is greater than or equal to."

1. $\frac{7}{9} - \frac{1}{12}$

a. Is $\frac{7}{9} \geq \frac{1}{2}$? _____

b. Round $\frac{7}{9}$. _____

c. Is $\frac{1}{12} \geq \frac{1}{2}$? _____

d. Round $\frac{1}{12}$. _____

e. Estimate the difference: _____ - _____ = _____

2. $7\frac{3}{8} + 3\frac{21}{26}$

a. Is $\frac{3}{8} \geq \frac{1}{2}$? _____

b. Round $7\frac{3}{8}$. _____

c. Is $\frac{21}{26} \geq \frac{1}{2}$? _____

d. Round $3\frac{21}{26}$. _____

e. Estimate the sum: _____ + _____ = _____

SKILL 1: Practice

Round each fraction to 0 or 1.

1. $\frac{8}{9}$ _____

2. $\frac{2}{15}$ _____

3. $\frac{5}{12}$ _____

4. $\frac{4}{27}$ _____

5. $\frac{7}{15}$ _____

6. $\frac{9}{11}$ _____

7. $\frac{3}{50}$ _____

8. $\frac{23}{25}$ _____

Round each mixed number to the nearest whole number.

9. $2\frac{1}{5}$ _____

10. $3\frac{4}{9}$ _____

11. $4\frac{7}{8}$ _____

12. $1\frac{11}{12}$ _____

13. $3\frac{9}{10}$ _____

14. $7\frac{6}{11}$ _____

15. $2\frac{2}{9}$ _____

16. $5\frac{4}{7}$ _____

Estimate each sum or difference.

17. $8\frac{7}{9} - 1\frac{2}{15}$ _____

18. $\frac{1}{8} + \frac{5}{9}$ _____

19. $\frac{2}{11} + \frac{3}{20}$ _____

20. $2\frac{1}{4} + \frac{11}{12}$ _____

21. $5\frac{1}{8} - 2\frac{13}{16}$ _____

22. $\frac{7}{8} - \frac{7}{9}$ _____

23. $6\frac{7}{9} + 1\frac{2}{15}$ _____

24. $\frac{9}{10} - \frac{2}{9}$ _____

25. $3\frac{10}{11} + 5\frac{3}{4}$ _____

26. $\frac{2}{5} + \frac{7}{12}$ _____

27. $4\frac{8}{15} - \frac{7}{9}$ _____

28. $3\frac{3}{15} + 2\frac{1}{10}$ _____

Solve.

29. Cal had $8\frac{3}{8}$ yards of fabric. He used $6\frac{5}{6}$ yards to reupholster a chair. About how much fabric does he have left? _____30. Luisa has $3\frac{1}{5}$ cups of apple juice and $2\frac{2}{3}$ cups of cherry cider. About how much fruit drink can she make? _____31. Which of the following is the best estimate of $\frac{7}{8} + 4\frac{1}{6}$?

A 4

C 5

B $4\frac{1}{2}$ D $5\frac{1}{2}$

Skill 1

32. Which of the following is the best estimate of $8\frac{5}{12} - 1\frac{2}{15}$?

F 6

H 7

G $6\frac{1}{2}$

J 9

Skill 1