

Name _____

Fractions: Addition and Subtraction

Solve. Reduce answers to lowest terms:

1. $\frac{3}{5}$
 $+\frac{1}{5}$

2. $\frac{4}{6}$
 $+\frac{2}{6}$

3. $\frac{5}{7}$
 $+\frac{4}{7}$

4. $\frac{6}{9}$
 $-\frac{4}{9}$

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

6. $\frac{3}{4}$
 $-\frac{5}{8}$

7. $\frac{12}{3}$
 $-\frac{9}{3}$

8. $\frac{6}{2}$
 $-\frac{5}{2}$

9. $\frac{6}{2}$
 $-\frac{6}{4}$

10. $\frac{4}{6}$
 $-\frac{11}{18}$

11. $\frac{9}{8}$
 $+\frac{2}{8}$

12. $\frac{6}{6}$
 $+\frac{14}{12}$

13. $\frac{9}{7}$
 $+\frac{3}{7}$

14. $\frac{0}{8}$
 $+\frac{4}{8}$

15. $\frac{2}{16}$
 $+\frac{1}{4}$

16. $\frac{18}{5}$
 $-\frac{3}{2}$

17. $\frac{11}{6}$
 $-\frac{2}{3}$

18. $\frac{7}{4}$
 $-\frac{9}{6}$

19. $\frac{5}{6} + \frac{8}{7} =$

20. $\frac{3}{2} - \frac{6}{8} =$

21. $\frac{4}{7} - \frac{1}{9} =$

22. $\frac{0}{3} + \frac{2}{9} =$

23. $\frac{5}{7} - \frac{3}{14} =$

24. $\frac{6}{7} - \frac{1}{2} =$

25. $\frac{3}{5} + \frac{2}{7} =$

27. $\frac{32}{2} - \frac{3}{4} =$

29. $\frac{3}{7} + \frac{5}{21} =$

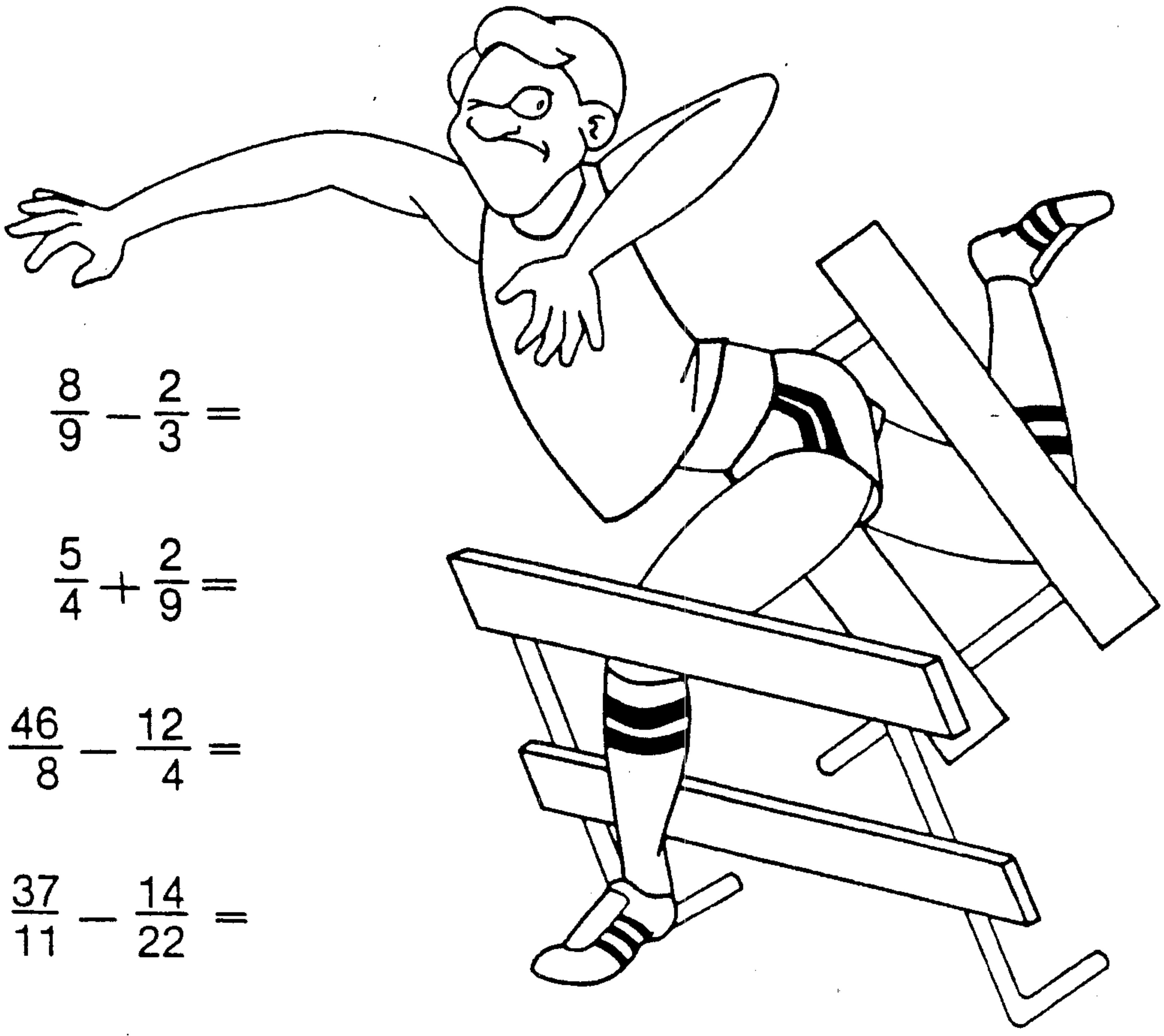
31. $\frac{0}{16} + \frac{7}{8} =$

26. $\frac{8}{9} - \frac{2}{3} =$

28. $\frac{5}{4} + \frac{2}{9} =$

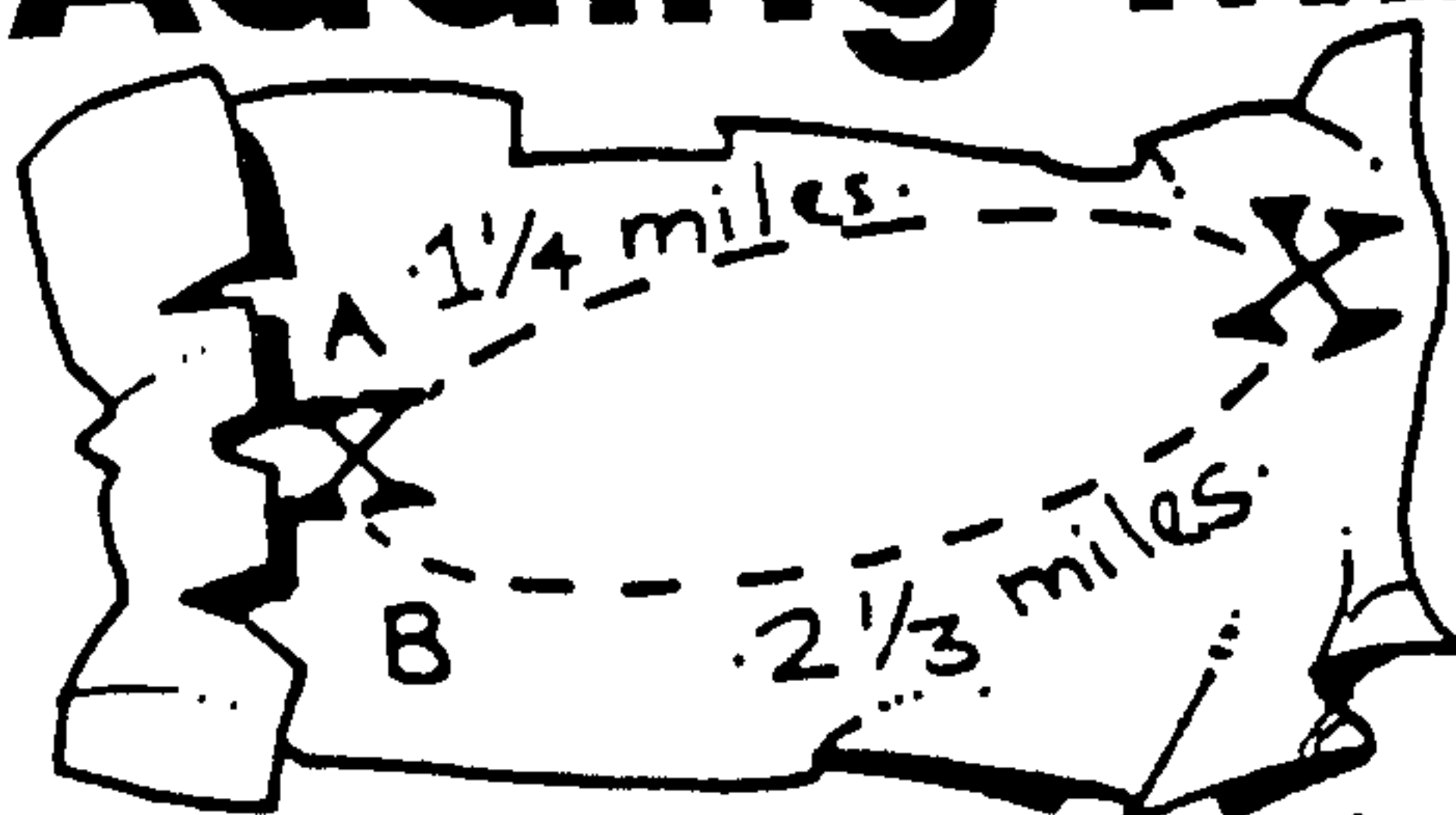
30. $\frac{46}{8} - \frac{12}{4} =$

32. $\frac{37}{11} - \frac{14}{22} =$



Adding Mixed Numbers

5.6



The hiking club took trail A to the falls and came back by trail B. How far did they hike?

Change the fractions to common denominators.

$$\begin{array}{r} 1 \frac{1}{4} \\ + 2 \frac{1}{3} \\ \hline \end{array}$$

→

→

$$\begin{array}{r} 1 \frac{3}{12} \\ + 2 \frac{4}{12} \\ \hline 3 \frac{7}{12} \end{array}$$

Add the fractions.

Add the whole numbers

miles

1. Add these mixed numbers.

$$\begin{array}{r} 1 \frac{1}{5} \\ + 2 \frac{1}{3} \\ \hline \end{array}$$

$$\begin{array}{r} 3 \frac{1}{2} \\ + 5 \frac{1}{3} \\ \hline \end{array}$$

$$\begin{array}{r} 2 \frac{2}{3} \\ + 1 \frac{1}{6} \\ \hline \end{array}$$

When the fraction in your answer is greater than 1, you will need to change it to a mixed number and add again.

$$\begin{array}{r} 2 \frac{2}{3} \\ + 3 \frac{3}{4} \\ \hline \end{array} \rightarrow \begin{array}{r} 2 \frac{8}{12} \\ + 3 \frac{9}{12} \\ \hline 5 \frac{17}{12} \end{array}$$

$$5 \frac{17}{12} = 5 + 1 \frac{5}{12} = 6 \frac{5}{12}$$

$$\begin{array}{r} 2. \quad 1 \frac{5}{12} \\ + 4 \frac{2}{3} \\ \hline \end{array}$$

$$\begin{array}{r} 5 \frac{4}{5} \\ + 2 \frac{7}{10} \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 3 \frac{1}{2} \\ + 6 \frac{5}{8} \\ \hline \end{array}$$

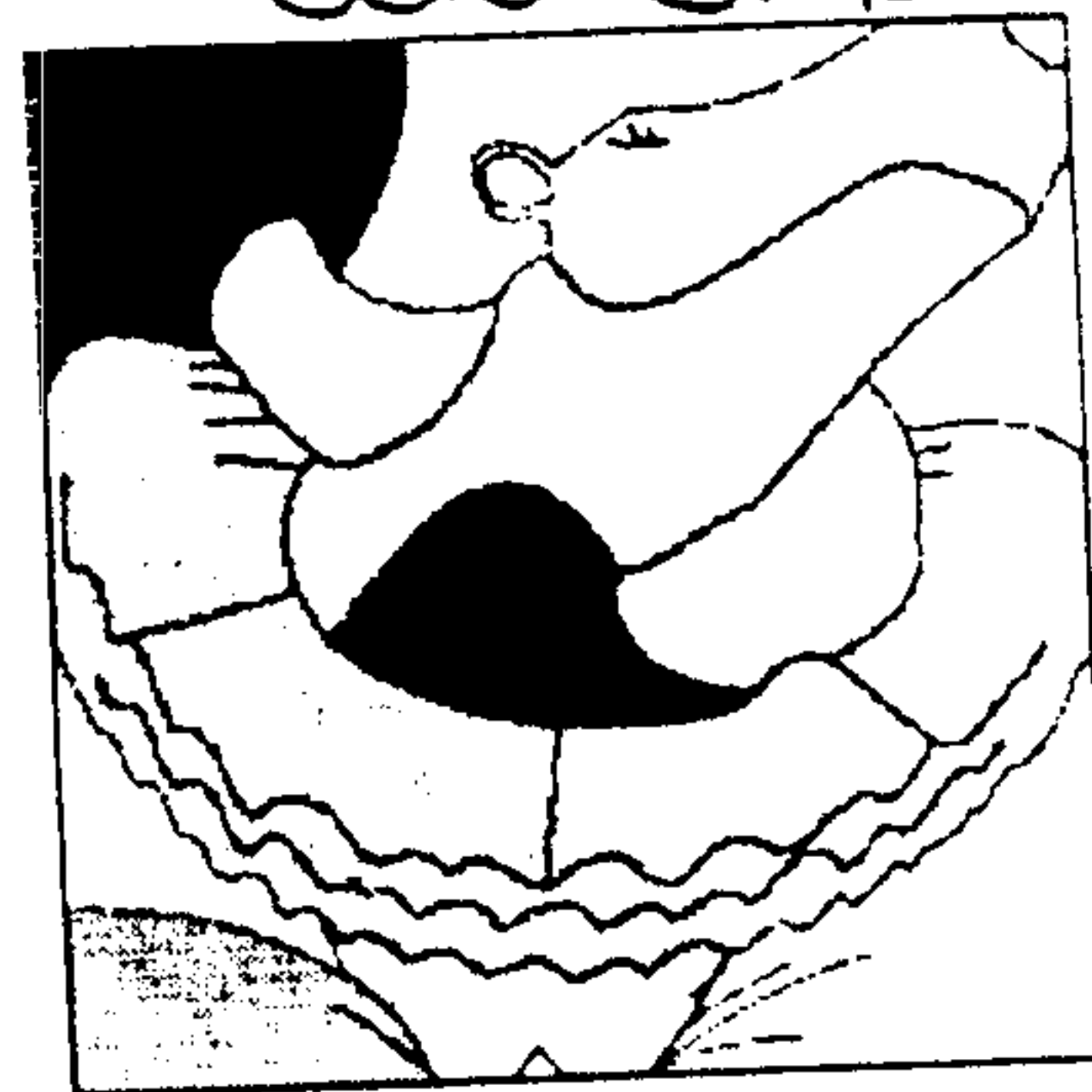
$$\begin{array}{r} 7 \frac{1}{3} \\ + 2 \frac{2}{5} \\ \hline \end{array}$$

Name _____

Date _____

Score _____

SOL 5.7b



Find the sum or difference.

1)

$$\begin{array}{r} 6\frac{5}{16} \\ + 4\frac{15}{16} \\ \hline \end{array}$$

2)

$$\begin{array}{r} 8\frac{8}{9} \\ - 1\frac{7}{9} \\ \hline \end{array}$$

3)

$$\begin{array}{r} 7\frac{6}{10} \\ - 5\frac{5}{10} \\ \hline \end{array}$$

4)

$$\begin{array}{r} 9\frac{2}{3} \\ - 5\frac{2}{3} \\ \hline \end{array}$$

5)

$$\begin{array}{r} 5\frac{3}{5} \\ - 1\frac{4}{5} \\ \hline \end{array}$$

6)

$$\begin{array}{r} 6\frac{8}{13} \\ - 4\frac{6}{13} \\ \hline \end{array}$$

7)

$$\begin{array}{r} 5\frac{3}{5} \\ - 1\frac{1}{5} \\ \hline \end{array}$$

8)

$$\begin{array}{r} 5\frac{7}{9} \\ - 4\frac{1}{9} \\ \hline \end{array}$$

9)

$$\begin{array}{r} 1\frac{6}{8} \\ + 9\frac{4}{8} \\ \hline \end{array}$$

10)

$$\begin{array}{r} 5\frac{8}{12} \\ + 9\frac{3}{12} \\ \hline \end{array}$$

11)

$$\begin{array}{r} 6\frac{1}{4} \\ + 7\frac{1}{4} \\ \hline \end{array}$$

12)

$$\begin{array}{r} 4\frac{5}{12} \\ - 3\frac{9}{12} \\ \hline \end{array}$$

13)

$$\begin{array}{r} 7\frac{3}{15} \\ + 3\frac{10}{15} \\ \hline \end{array}$$

14)

$$\begin{array}{r} 8\frac{12}{15} \\ - 2\frac{14}{15} \\ \hline \end{array}$$

15)

$$\begin{array}{r} 6\frac{4}{5} \\ + 3\frac{1}{5} \\ \hline \end{array}$$

16)

$$\begin{array}{r} 4\frac{1}{3} \\ - 3\frac{1}{3} \\ \hline \end{array}$$

17)

$$\begin{array}{r} 9\frac{5}{9} \\ - 2\frac{1}{9} \\ \hline \end{array}$$

18)

$$\begin{array}{r} 6\frac{10}{14} \\ - 5\frac{13}{14} \\ \hline \end{array}$$

19)

$$\begin{array}{r} 7\frac{2}{9} \\ - 5\frac{5}{9} \\ \hline \end{array}$$

20)

$$\begin{array}{r} 9\frac{8}{11} \\ - 1\frac{6}{11} \\ \hline \end{array}$$

Flower Power

5.6

Subtracting mixed numbers with renaming

Name _____

Using colored pencils, markers, or crayons, color the flowers as indicated by their differences.

$$6\frac{2}{3} - \text{yellow with green stars}$$

$$11\frac{3}{5} - \text{pink with yellow polka dots}$$

$$11\frac{3}{4} - \text{blue and white stripes}$$

$$12\frac{3}{5} - \text{purple}$$

$$13\frac{19}{20} - \text{red and white stripes}$$

$$8\frac{7}{18} - \text{blue and green stripes}$$

$$6\frac{9}{10} - \text{orange}$$

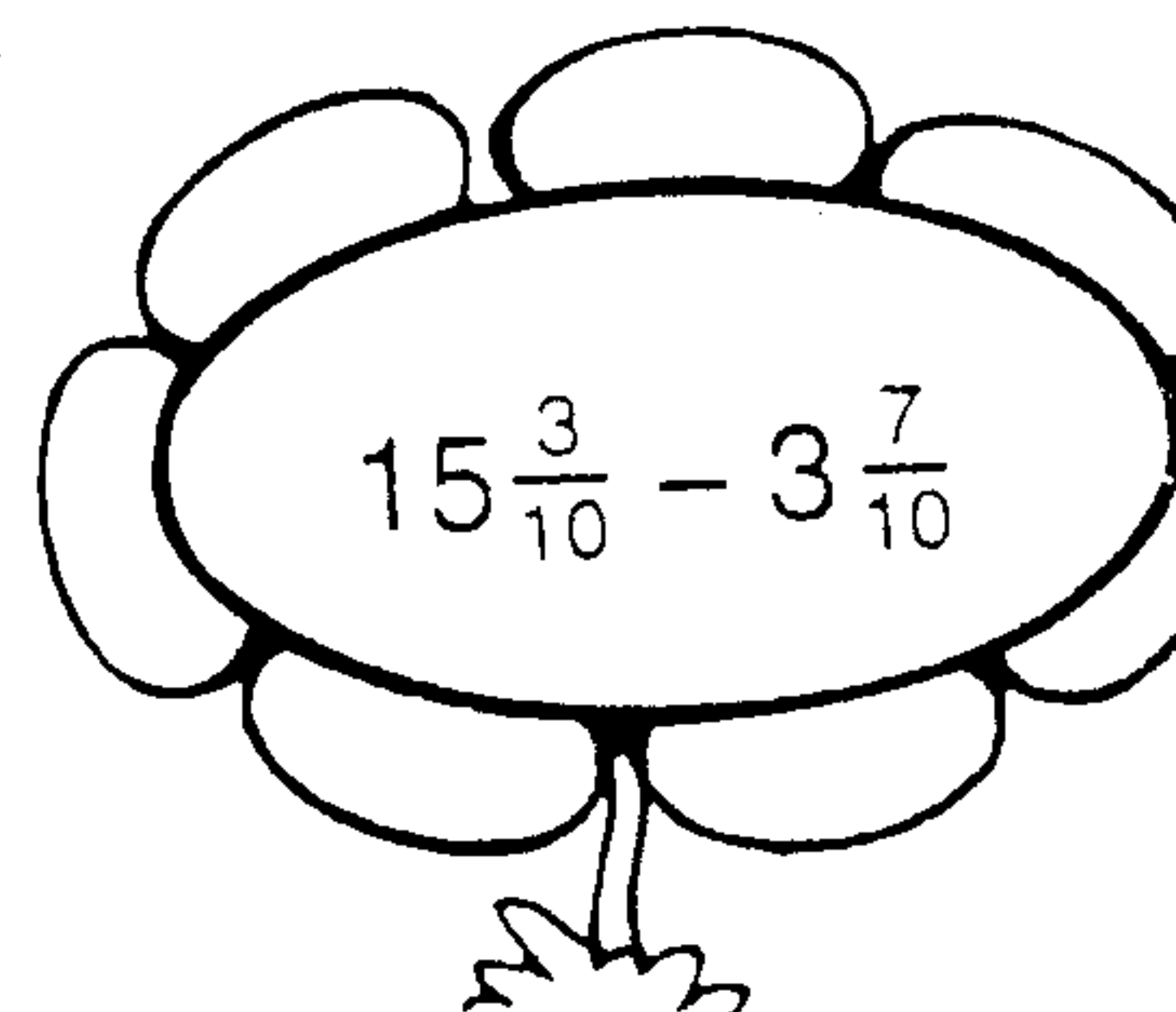
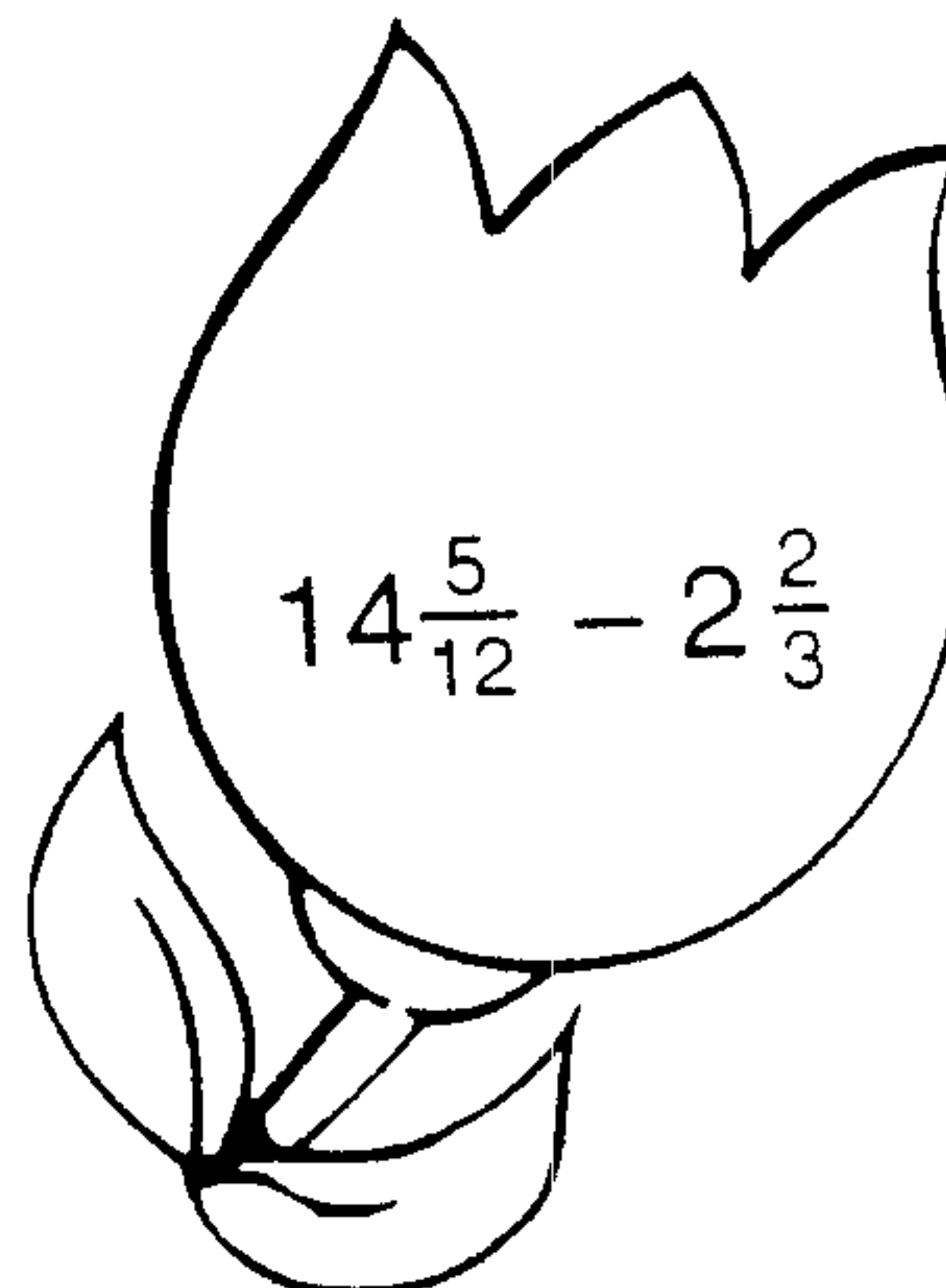
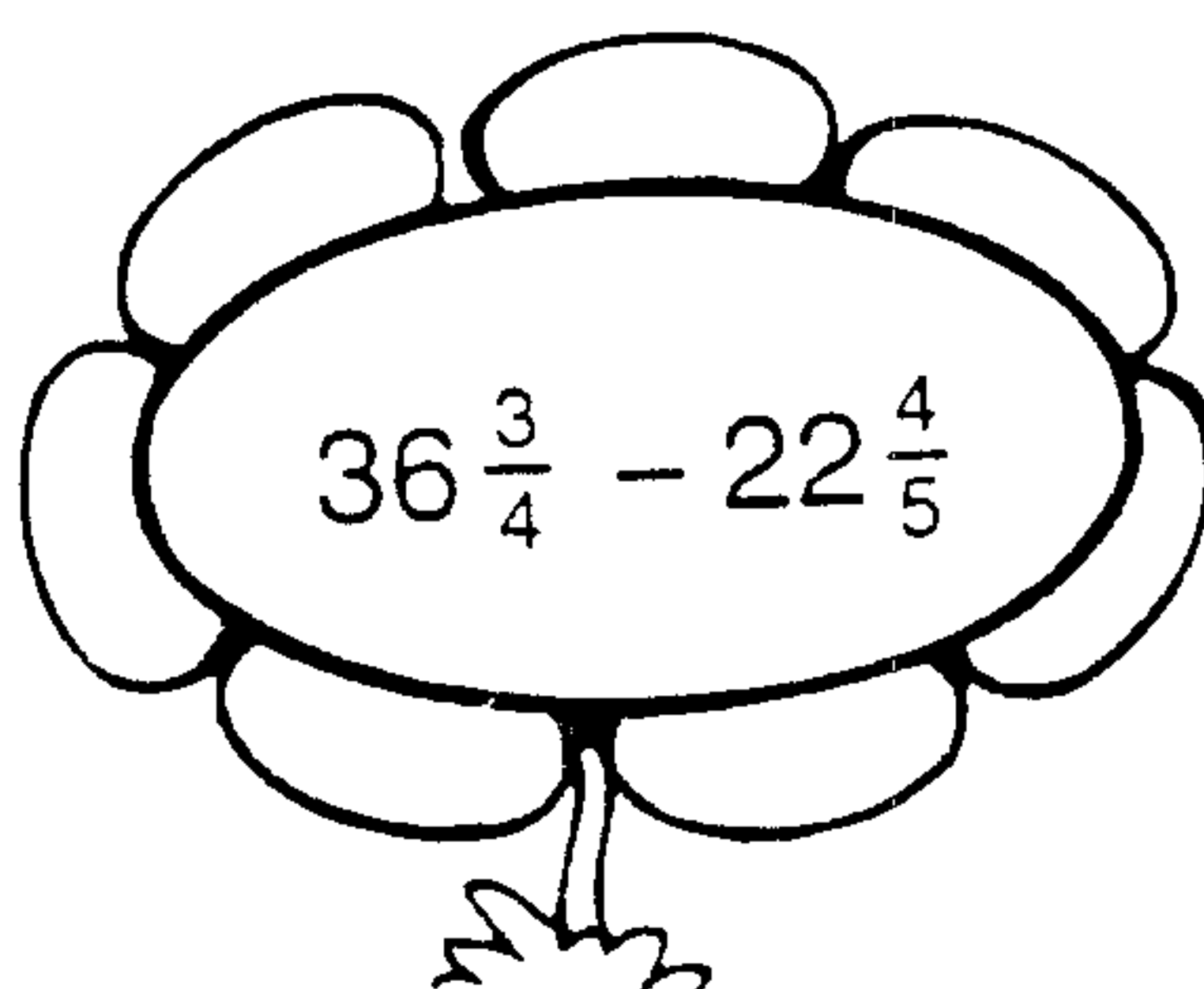
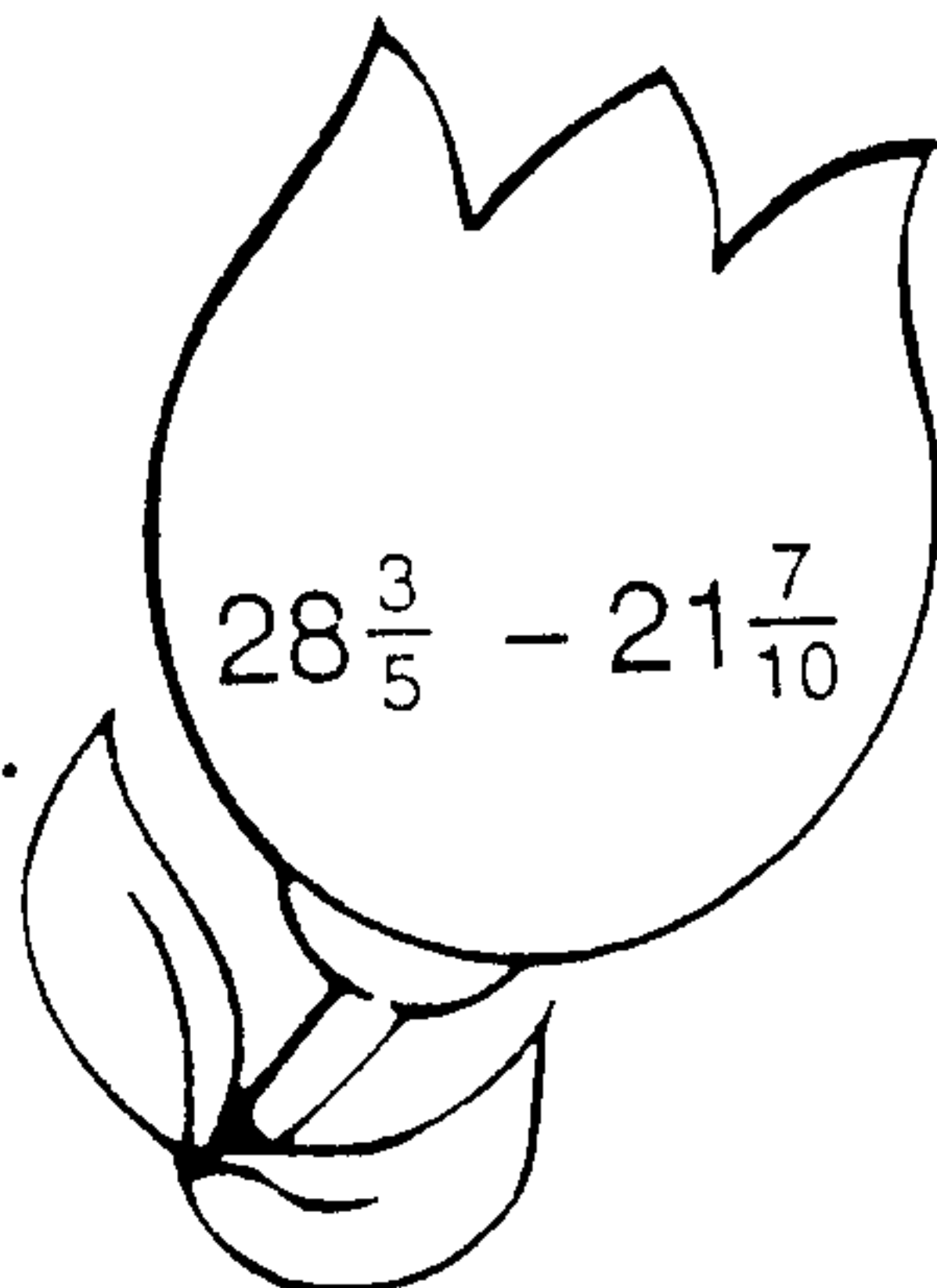
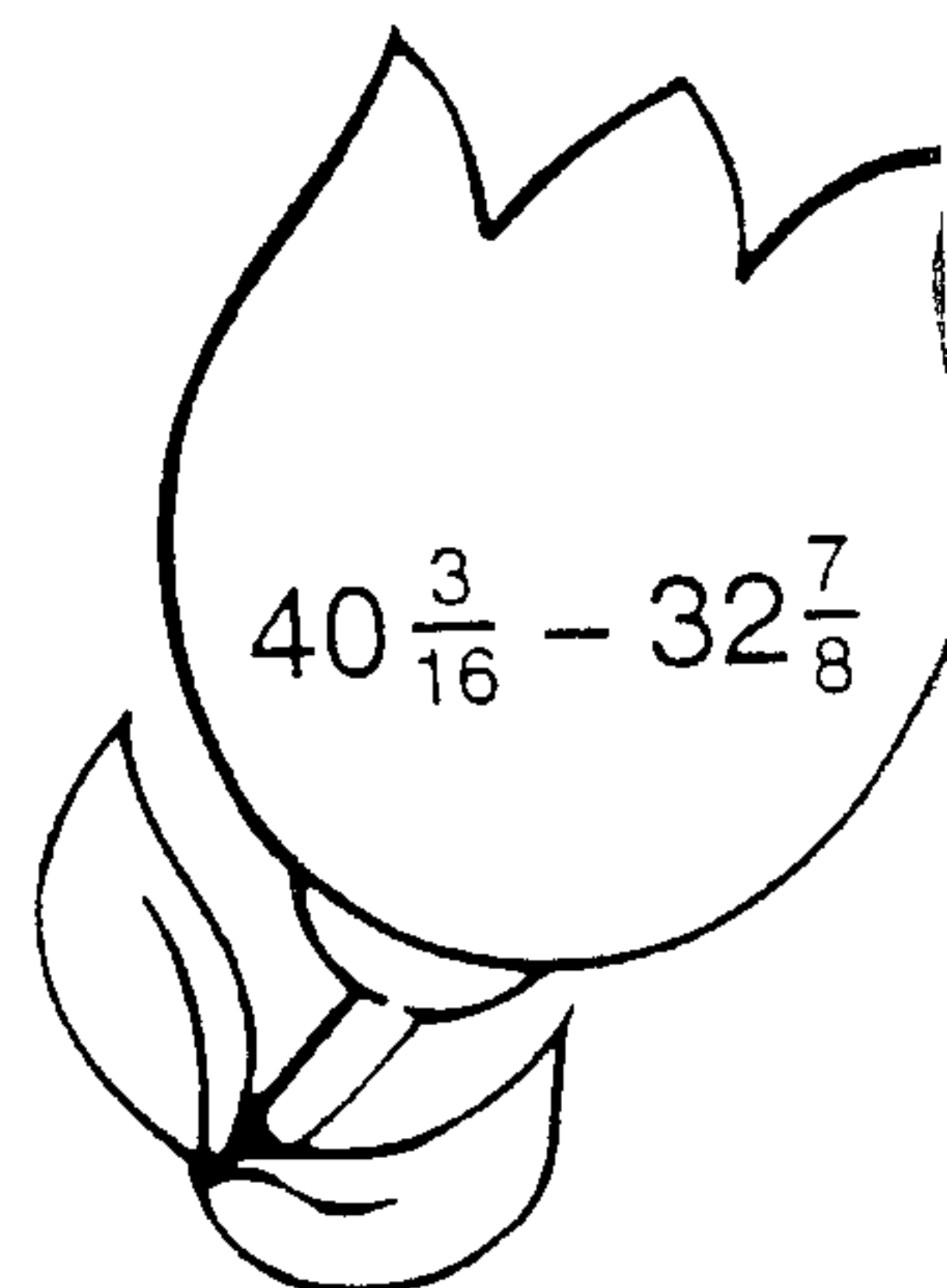
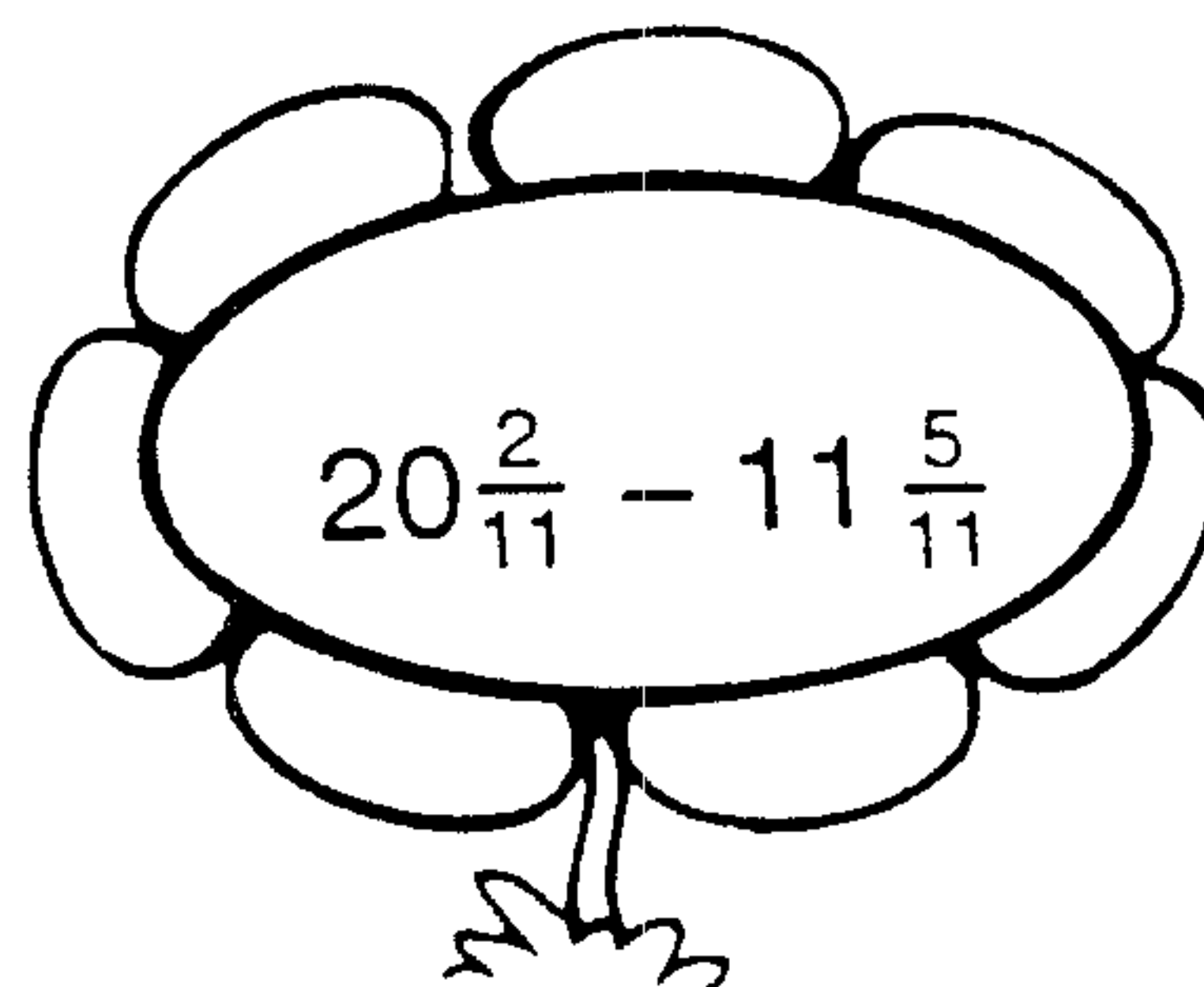
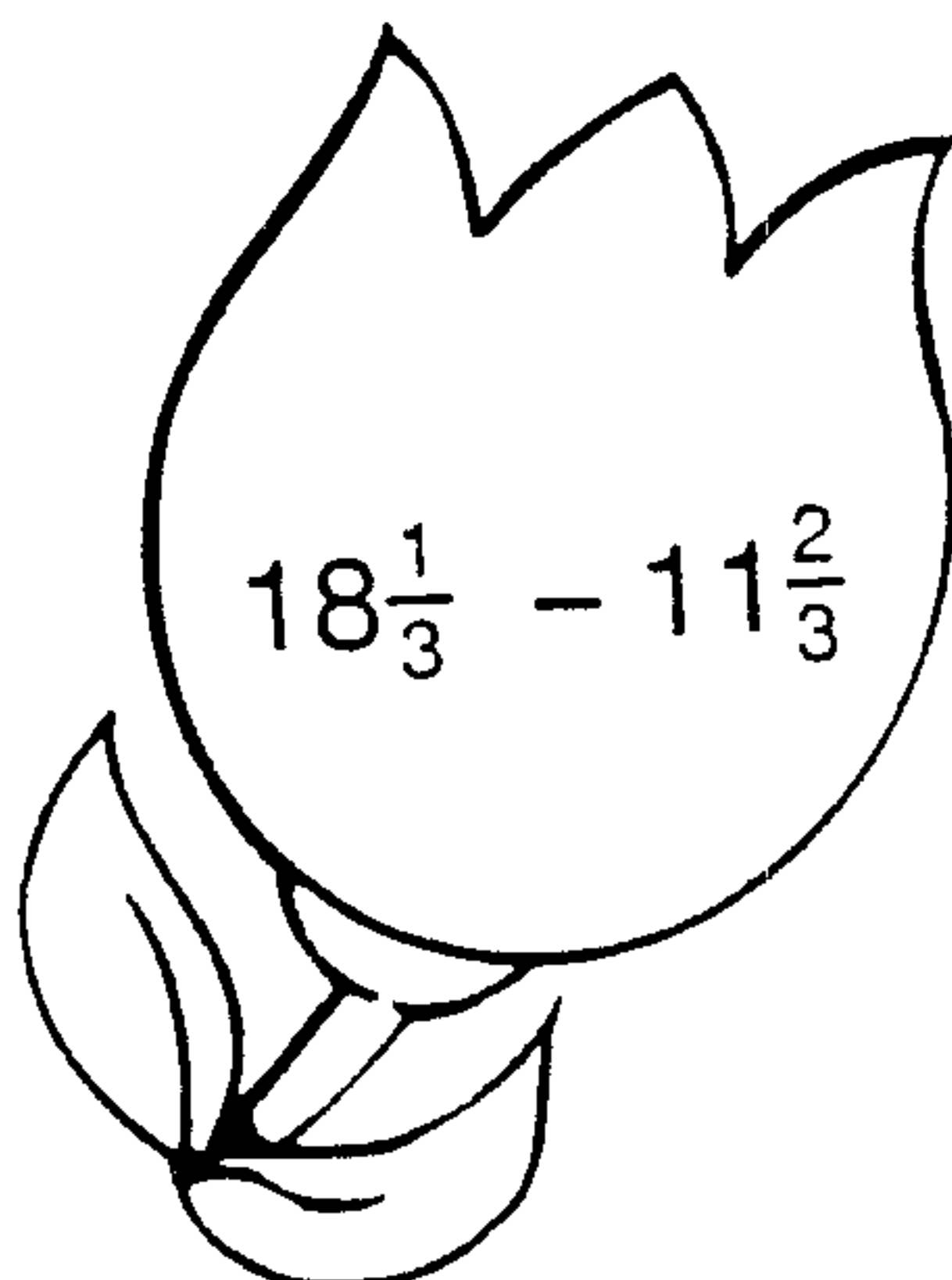
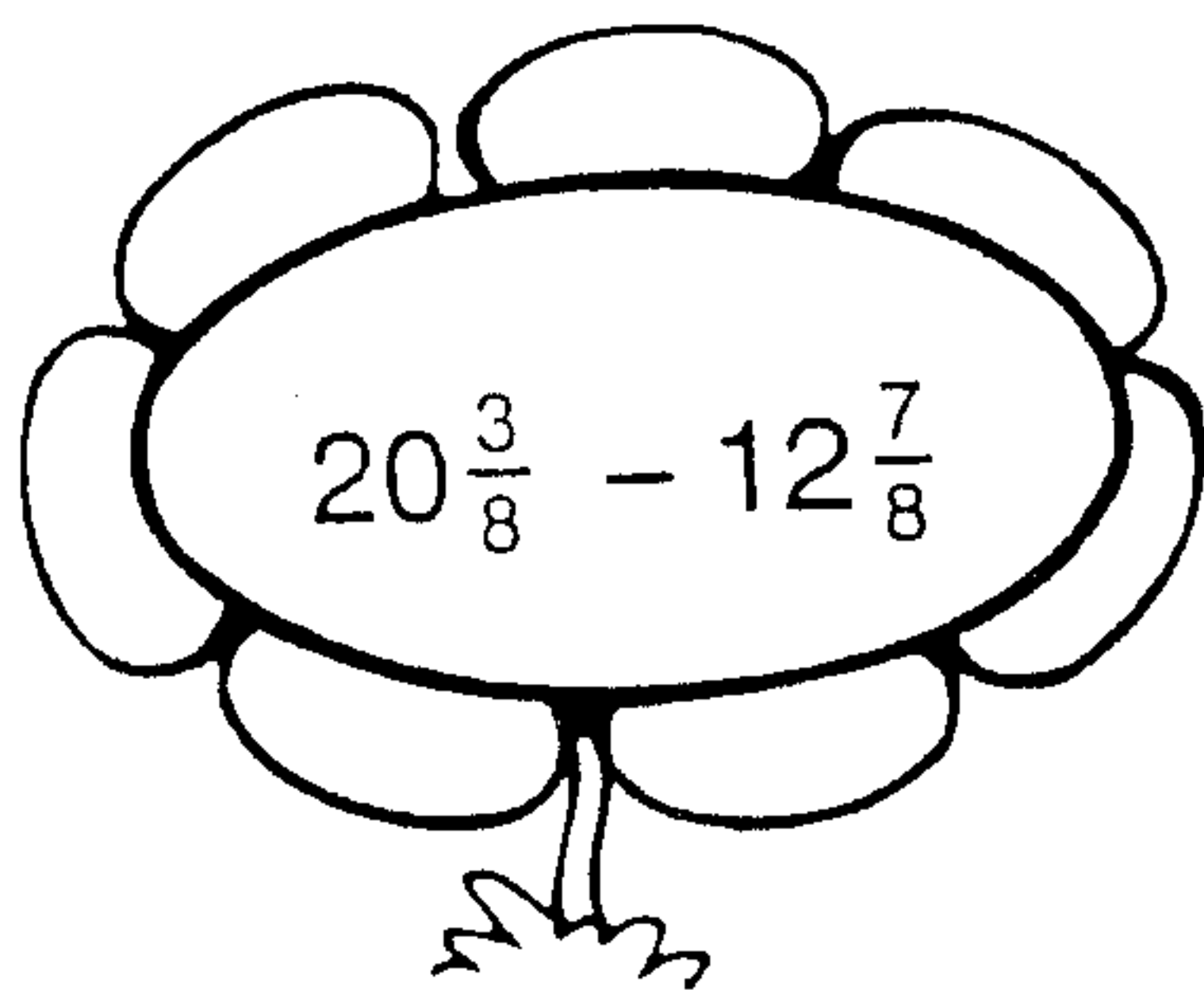
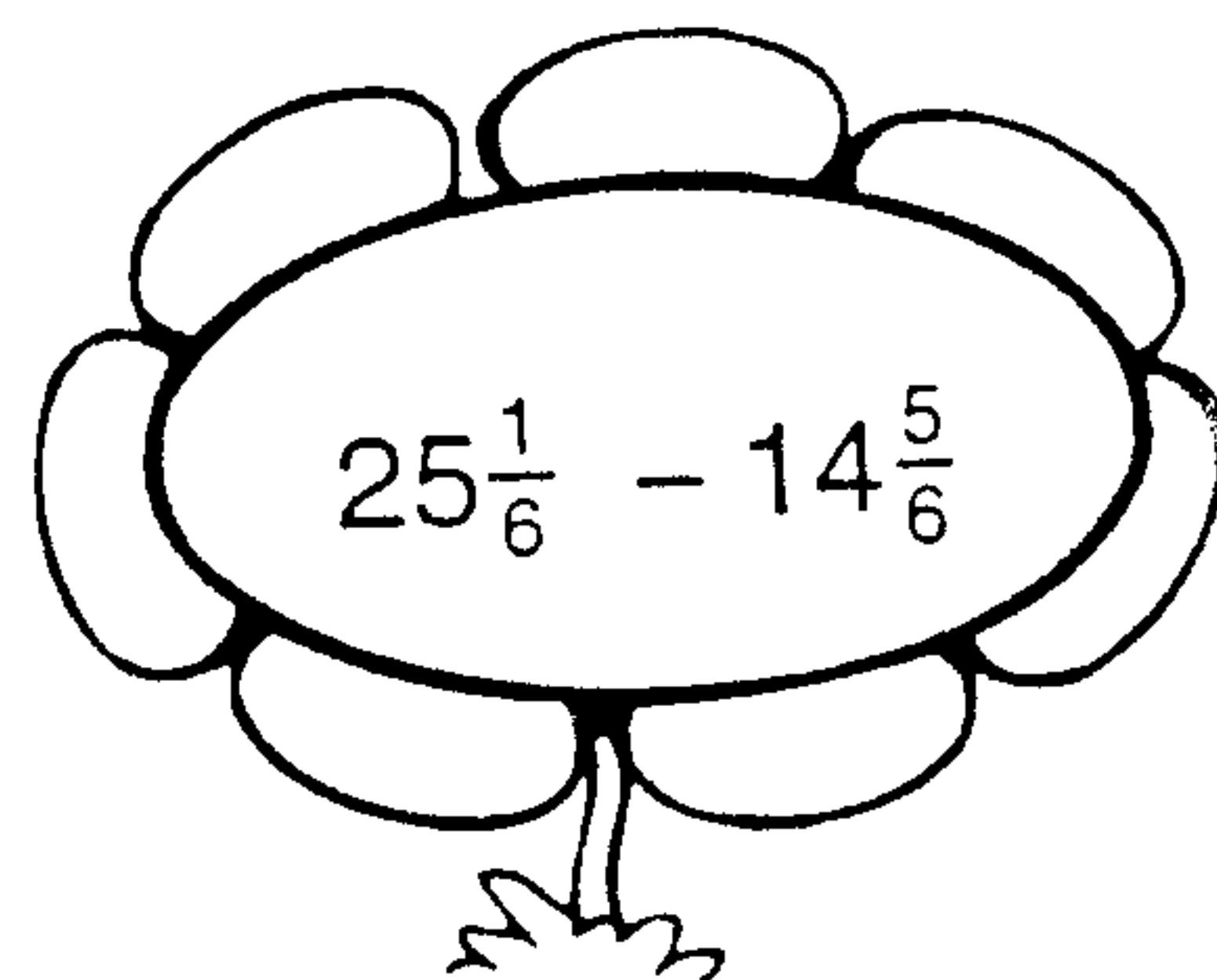
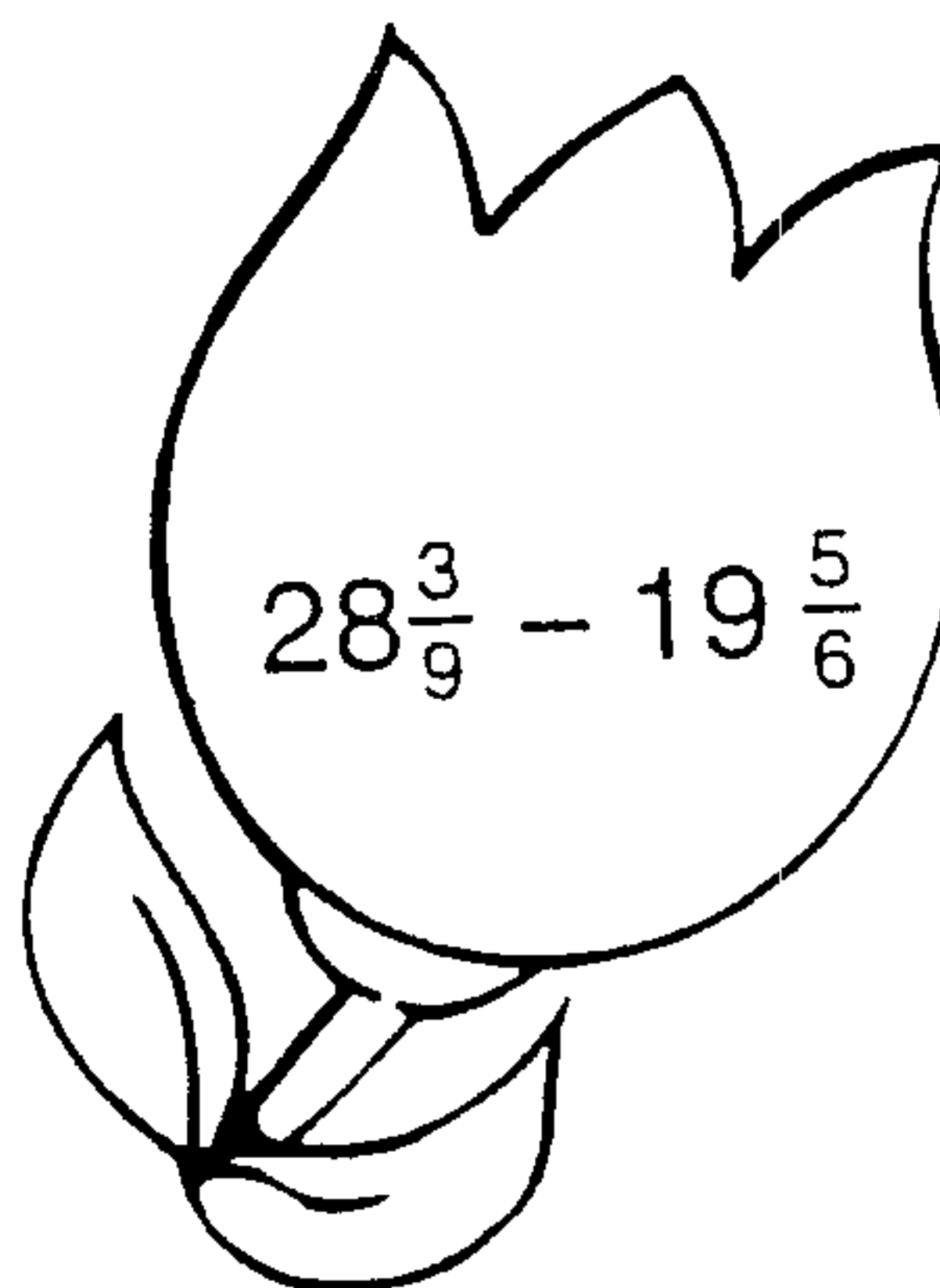
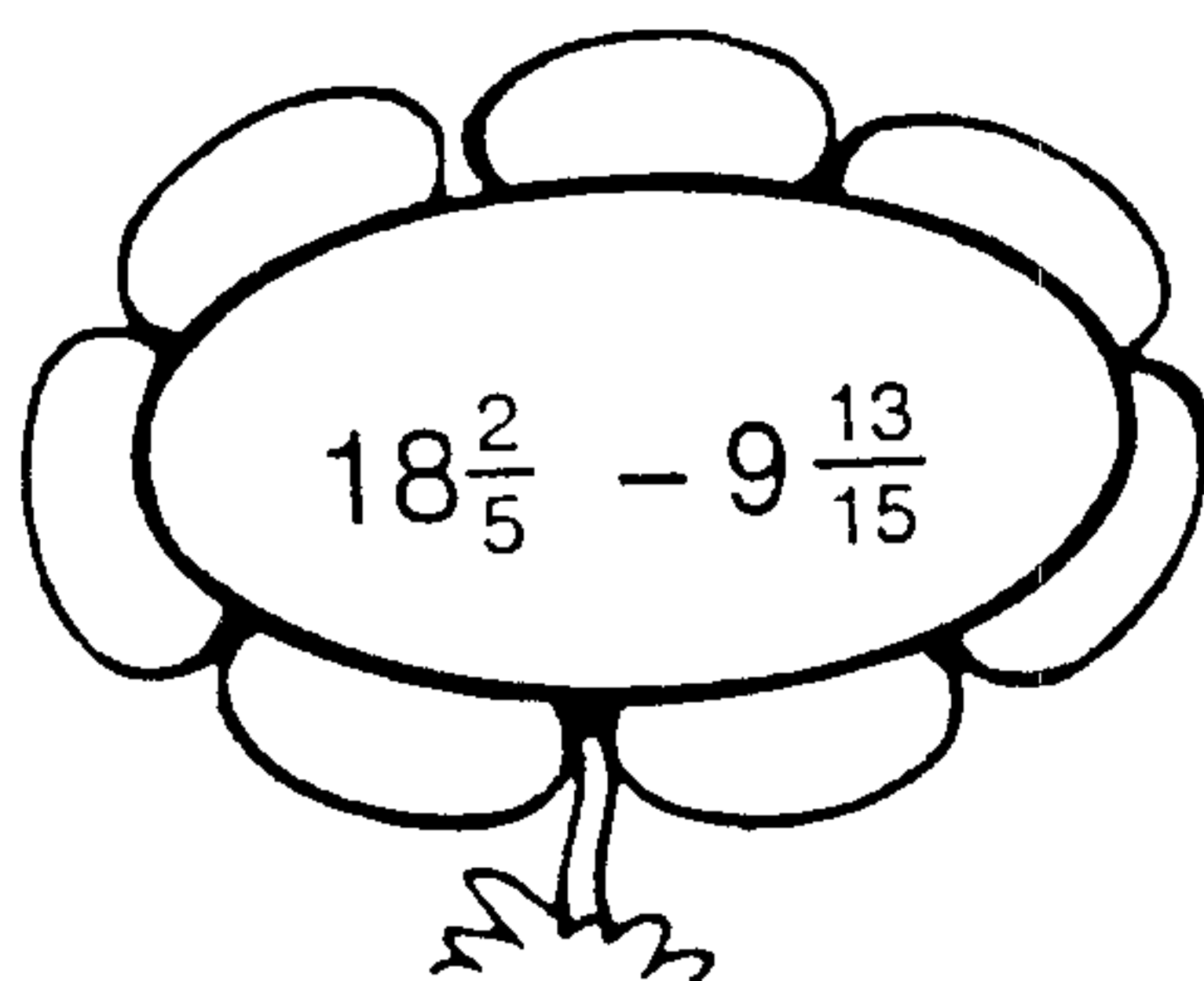
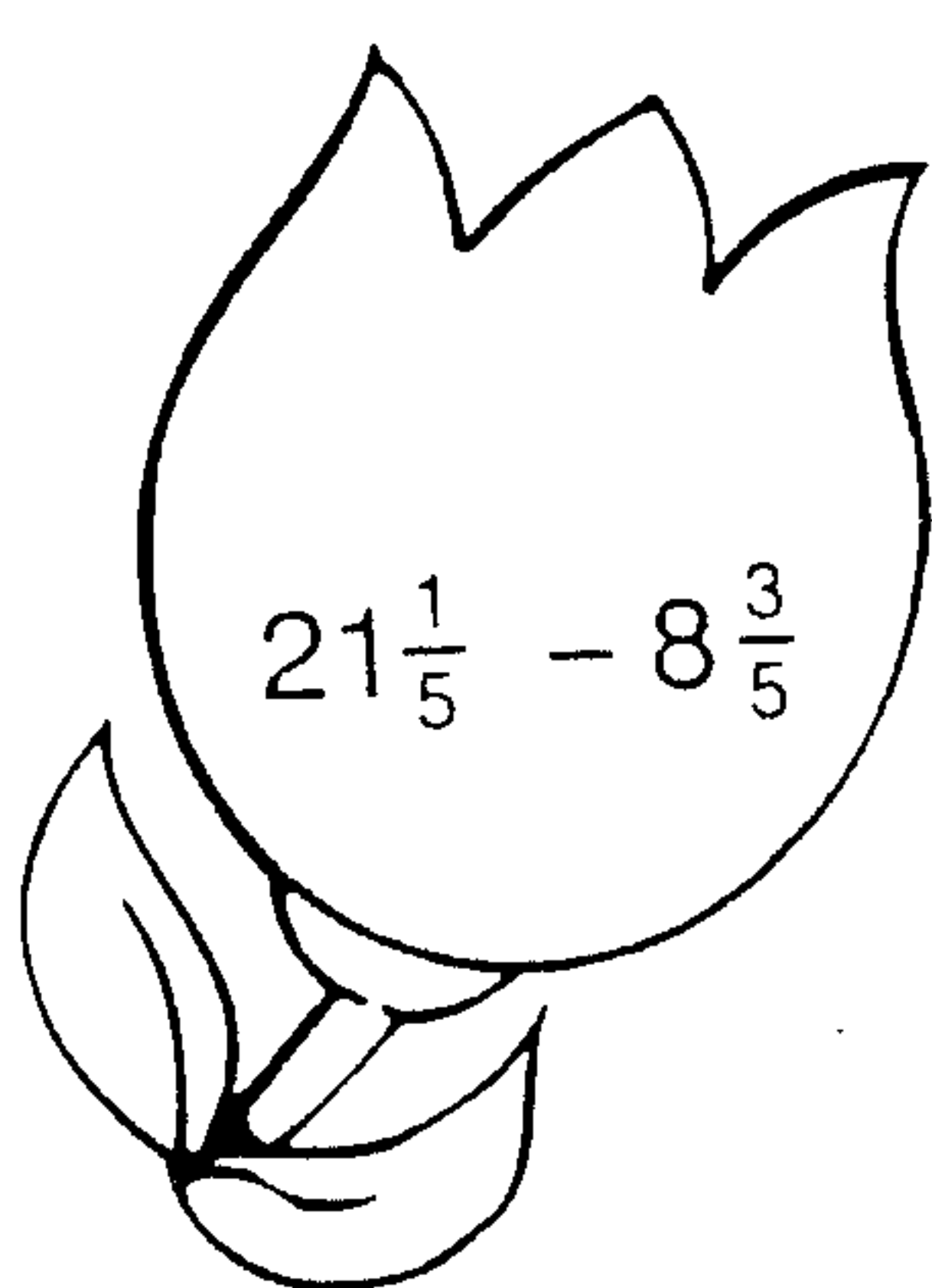
$$8\frac{8}{11} - \text{purple and green checks}$$

$$10\frac{1}{3} - \text{blue}$$

$$7\frac{5}{16} - \text{pink with white swirls}$$

$$7\frac{1}{2} - \text{yellow with orange polka dots}$$

$$12\frac{8}{15} - \text{red with purple stars}$$

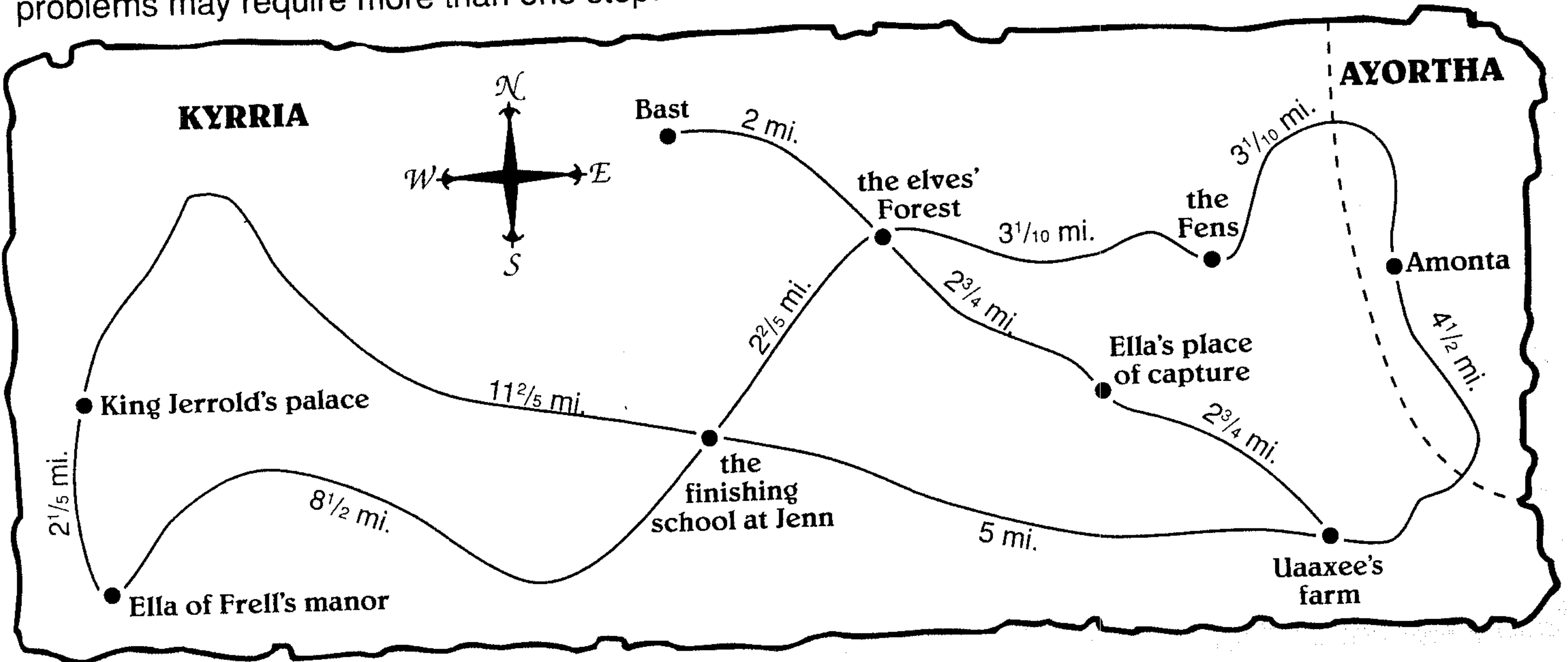


Name _____

Problem solving with mixed numerals

Ella's Enchanted Trail

Below is a map showing places that are important to Ella. Use the map to solve the following math problems. Show your work on another sheet of paper, and reduce all answers to the lowest terms. Then write the answers on the lines provided. Warning: Solving some of these enchanted problems may require more than one step!



1. Ella walks from her manor to King Jerrold's palace, then back home. How far does she walk?

2. When Ella leaves Jenn, she travels north through the elves' Forest, then south to Uaaxee's farm. How long is her trip? _____
3. There is a shorter way for Ella to get from Jenn to Uaaxee's farm. How much shorter is this route than the one Ella uses in number 2? _____
4. The ogres leave the Fens and travel through the elves' Forest to the place where they capture Ella. How far do they travel? _____
5. The ogres leave the place where they have captured Ella and go to the elves' Forest. Char leaves Jenn and heads to the elves' Forest too. How much farther do the ogres travel than Char? _____
6. Who lives closer to Bast: Ella or Areida from Ayortha? _____ How much closer?

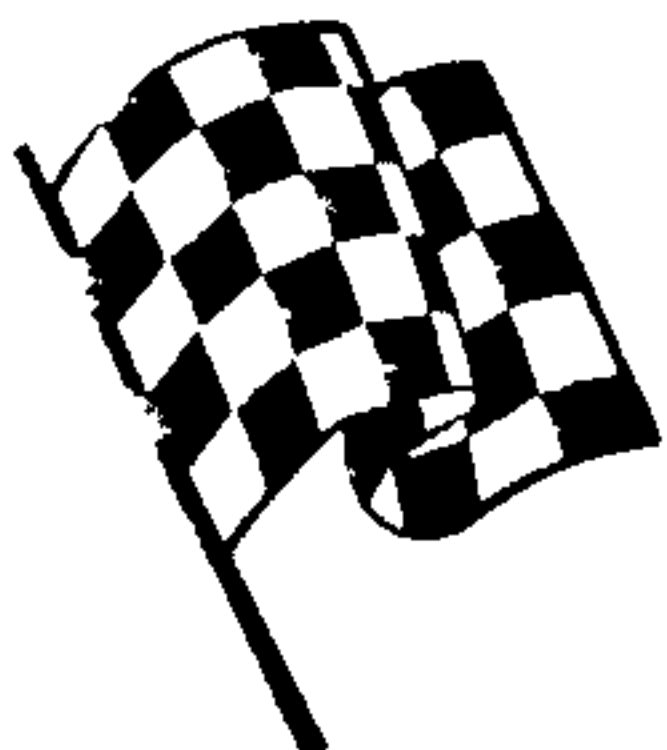
7. If Prince Char leaves the palace to visit Ella in Jenn, he can take one of two different routes. How long is the shorter route? _____ How much shorter is it than the longer route?

8. If Ella had truly traveled from Bast to the ball at the palace, taking the shortest route possible, how far would she have had to travel? _____ What would be the round-trip distance?

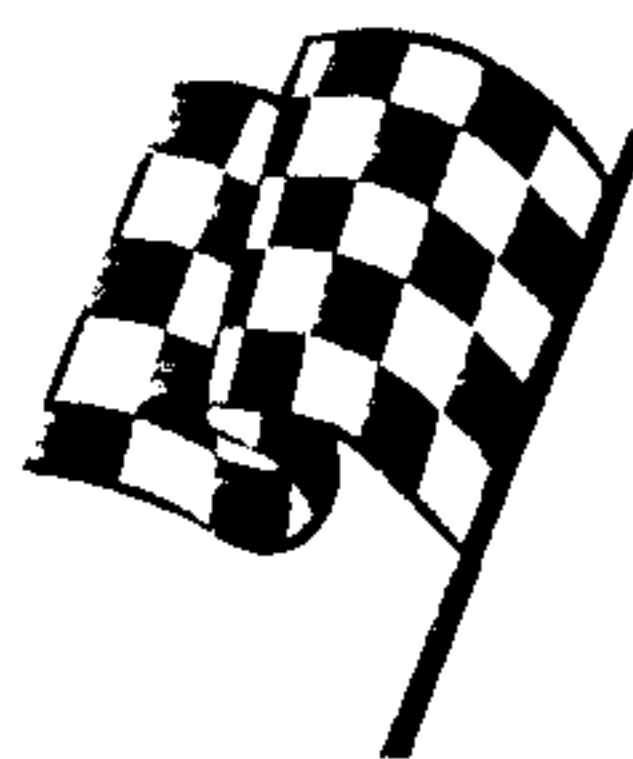
9. Areida leaves Amonta and takes the shortest route to Jenn. Ella leaves her manor and takes the shortest route to Jenn too. How far does each girl travel? _____
10. In number 9, who travels farther? _____ How much farther? _____

Name _____

Game for two: adding & subtracting mixed numbers



Race to 25!



Challenge a friend in this race to 25!

Object of the game: to get a final score closer to 25

How to play:

1. Player 1: Roll the die and write the number in the Start box. Roll the die again and find the matching fraction in the list below. Write that fraction in the Start box beside the whole number to make a mixed number.

$$1 = \frac{1}{8} \quad 2 = \frac{1}{4} \quad 3 = \frac{3}{8} \quad 4 = \frac{1}{2} \quad 5 = \frac{5}{8} \quad 6 = \frac{3}{4}$$

2. Player 2: Take a turn in the same manner.
3. Player 1: Repeat Step 1 and write the mixed number in the Round 1 blank. Then either add that number to or subtract it from the Start number. If you add, color an addition sign at the bottom of the page. If you subtract, color a subtraction sign.
4. Player 2: Check Player 1's work. If Player 1 is incorrect, rework the problem. Then take a turn in the same manner, with Player 1 checking your work.
5. Play continues for ten more rounds. Each player adds five times and subtracts five times, coloring a matching sign at the bottom of the page for each round. Each player keeps a running score by adding each round's mixed number to or subtracting it from the answer of the previous round.

Bonus Box: At any time during the game, you may use the Bonus Box at the bottom of the page. During this round, you may either add *or* subtract. Then color the Bonus Box.

6. The winner is the player who has a final score closer to 25.

Start:

Round 1: _____

answer:

Round 2: _____

answer:

Round 3: _____

answer:

Round 4: _____

answer:

Round 5: _____

answer:

Round 6: _____

answer:

Round 7: _____

answer:

Round 8: _____

answer:

Round 9: _____

answer:

Round 10: _____

answer:

Round 11: _____

answer:

Final score:

| | | | | | | | | | | |
|---|---|---|---|---|-----------|---|---|---|---|---|
| + | - | + | - | + | Bonus Box | - | + | - | + | - |
|---|---|---|---|---|-----------|---|---|---|---|---|

Name _____

OK, Everyone Reduce!



Reduce to lowest terms.

| | | |
|----------------|--|-------------------------------|
| $\frac{6}{20}$ | largest number that will divide evenly into both $\frac{6}{20} \div \frac{2}{2} = \frac{3}{10}$ | $\frac{6}{20} = \frac{3}{10}$ |
|----------------|--|-------------------------------|

$$\frac{5}{20} = \frac{\quad}{4}$$

$$\frac{8}{20} = \frac{\quad}{\quad}$$

$$\frac{3}{15} = \frac{\quad}{\quad}$$

$$\frac{12}{20} = \frac{\quad}{\quad}$$

$$\frac{2}{8} = \frac{\quad}{\quad}$$

$$\frac{12}{16} = \frac{\quad}{\quad}$$

$$\frac{14}{16} = \frac{\quad}{\quad}$$

$$\frac{4}{8} = \frac{\quad}{\quad}$$

$$\frac{9}{12} = \frac{\quad}{\quad}$$

$$\frac{5}{10} = \frac{\quad}{\quad}$$

$$\frac{6}{10} = \frac{\quad}{\quad}$$

$$\frac{10}{15} = \frac{\quad}{\quad}$$

$$\frac{2}{4} = \frac{\quad}{\quad}$$

$$\frac{4}{8} = \frac{\quad}{\quad}$$

$$\frac{6}{24} = \frac{\quad}{\quad}$$

$$\frac{6}{8} = \frac{\quad}{\quad}$$

$$\frac{8}{16} = \frac{\quad}{\quad}$$

$$\frac{2}{12} = \frac{\quad}{\quad}$$

$$\frac{2}{10} = \frac{\quad}{\quad}$$

$$\frac{8}{12} = \frac{\quad}{\quad}$$

$$\frac{4}{20} = \frac{\quad}{\quad}$$

$$\frac{3}{12} = \frac{\quad}{\quad}$$

$$\frac{9}{15} = \frac{\quad}{\quad}$$

$$\frac{4}{12} = \frac{\quad}{\quad}$$

$$\frac{10}{24} = \frac{\quad}{\quad}$$

$$\frac{6}{20} = \frac{\quad}{\quad}$$

$$\frac{10}{12} = \frac{\quad}{\quad}$$

$$\frac{12}{24} = \frac{\quad}{\quad}$$

$$\frac{4}{10} = \frac{\quad}{\quad}$$

$$\frac{8}{10} = \frac{\quad}{\quad}$$

$$\frac{2}{10} = \frac{\quad}{\quad}$$

$$\frac{6}{12} = \frac{\quad}{\quad}$$

Name _____

5.6

Hot on the Trail

Solve. Write each answer in its simplest form.



A.

$$\frac{3}{8} + \frac{1}{4} =$$

B.

$$\frac{1}{2} + \frac{3}{12} =$$

C.

$$\frac{7}{8} - \frac{1}{3} =$$

D.

$$\frac{1}{6} + \frac{1}{4} =$$

E.

$$\frac{11}{12} - \frac{1}{3} =$$

F.

$$\frac{1}{2} + \frac{1}{3} =$$

G.

$$\frac{3}{9} + \frac{1}{6} =$$

H.

$$\frac{7}{10} - \frac{2}{5} =$$

I.

$$\frac{7}{14} - \frac{3}{7} =$$

J.

$$\frac{1}{3} + \frac{1}{5} =$$

K.

$$\frac{8}{9} - \frac{5}{9} =$$

L.

$$\frac{2}{5} + \frac{1}{6} =$$

M.

$$\frac{5}{6} - \frac{1}{8} =$$

N.

$$\frac{2}{7} + \frac{1}{2} =$$

O.

$$\frac{4}{6} + \frac{3}{12} =$$



Name _____

Equivalent fractions, simplifying

Magic Squares

These squares are all magical in some way. Just follow the directions for completing each set.

In each square, circle three fractions in a row that are in lowest terms.

1.

| | | |
|----------------|----------------|-----------------|
| $\frac{6}{9}$ | $\frac{6}{18}$ | $\frac{11}{22}$ |
| $\frac{3}{7}$ | $\frac{4}{5}$ | $\frac{9}{10}$ |
| $\frac{5}{15}$ | $\frac{3}{9}$ | $\frac{2}{4}$ |

2.

| | | |
|----------------|---------------|----------------|
| $\frac{6}{9}$ | $\frac{5}{9}$ | $\frac{2}{3}$ |
| $\frac{5}{10}$ | $\frac{1}{9}$ | $\frac{3}{15}$ |
| $\frac{7}{8}$ | $\frac{4}{8}$ | $\frac{6}{8}$ |

3.

| | | |
|-----------------|-----------------|-----------------|
| $\frac{12}{15}$ | $\frac{6}{7}$ | $\frac{3}{5}$ |
| $\frac{7}{21}$ | $\frac{11}{14}$ | $\frac{17}{20}$ |
| $\frac{10}{16}$ | $\frac{14}{18}$ | $\frac{4}{9}$ |

In each square, circle three fractions in a row that are equivalent to each other.

4.

| | | |
|----------------|-----------------|-----------------|
| $\frac{8}{10}$ | $\frac{3}{5}$ | $\frac{1}{2}$ |
| $\frac{4}{5}$ | $\frac{12}{20}$ | $\frac{2}{3}$ |
| $\frac{5}{20}$ | $\frac{6}{10}$ | $\frac{10}{12}$ |

5.

| | | |
|---------------|-----------------|---------------|
| $\frac{5}{6}$ | $\frac{10}{18}$ | $\frac{2}{3}$ |
| $\frac{6}{9}$ | $\frac{9}{12}$ | $\frac{3}{4}$ |
| $\frac{3}{4}$ | $\frac{12}{16}$ | $\frac{6}{8}$ |

6.

| | | |
|-----------------|-----------------|----------------|
| $\frac{1}{2}$ | $\frac{2}{4}$ | $\frac{3}{9}$ |
| $\frac{10}{18}$ | $\frac{10}{20}$ | $\frac{4}{10}$ |
| $\frac{3}{6}$ | $\frac{3}{5}$ | $\frac{6}{12}$ |

Circle three fractions in a row that are equivalent to the following:

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

| | | |
|-----------------|-----------------|-----------------|
| $\frac{18}{30}$ | $\frac{16}{20}$ | $\frac{8}{10}$ |
| $\frac{10}{18}$ | $\frac{20}{25}$ | $\frac{12}{20}$ |
| $\frac{12}{15}$ | $\frac{20}{32}$ | $\frac{16}{25}$ |

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

| | | |
|-----------------|-----------------|-----------------|
| $\frac{12}{20}$ | $\frac{10}{15}$ | $\frac{8}{12}$ |
| $\frac{4}{6}$ | $\frac{6}{9}$ | $\frac{16}{28}$ |
| $\frac{6}{12}$ | $\frac{16}{24}$ | $\frac{10}{18}$ |

9. $\frac{5}{6}$

| | | |
|-----------------|-----------------|-----------------|
| $\frac{10}{12}$ | $\frac{8}{18}$ | $\frac{30}{42}$ |
| $\frac{25}{30}$ | $\frac{35}{40}$ | $\frac{20}{24}$ |
| $\frac{15}{18}$ | $\frac{40}{42}$ | $\frac{15}{20}$ |

In each square, circle the fraction that is *not* equivalent to the other eight.

10.

| | | |
|-----------------|-----------------|----------------|
| $\frac{4}{8}$ | $\frac{6}{12}$ | $\frac{1}{2}$ |
| $\frac{2}{4}$ | $\frac{5}{10}$ | $\frac{9}{18}$ |
| $\frac{13}{28}$ | $\frac{12}{24}$ | $\frac{3}{6}$ |

11.

| | | |
|-----------------|-----------------|----------------|
| $\frac{2}{8}$ | $\frac{5}{20}$ | $\frac{3}{12}$ |
| $\frac{10}{40}$ | $\frac{6}{24}$ | $\frac{1}{4}$ |
| $\frac{4}{16}$ | $\frac{10}{32}$ | $\frac{9}{36}$ |

12.

| | | |
|-----------------|-----------------|-----------------|
| $\frac{16}{40}$ | $\frac{8}{20}$ | $\frac{12}{30}$ |
| $\frac{6}{15}$ | $\frac{4}{10}$ | $\frac{2}{5}$ |
| $\frac{10}{25}$ | $\frac{14}{35}$ | $\frac{20}{45}$ |

Bonus Box: Make a 3 x 3 grid. Write each of the digits 1–9 in the grid so that the sum of the digits in each row (vertical, horizontal, and diagonal) is 15.

Name _____

Like and unlike fractions and mixed numbers

5.6

"Par-fect" Fractions

Solve. Find each answer below. Write each problem number on its matching flag. One flag will not be used.

1.
$$\begin{array}{r} \frac{3}{5} \\ + \frac{3}{8} \\ \hline \end{array}$$

2.
$$\begin{array}{r} \frac{9}{11} \\ - \frac{3}{11} \\ \hline \end{array}$$

3.
$$\begin{array}{r} 1\frac{7}{8} \\ + 3\frac{5}{8} \\ \hline \end{array}$$

4.
$$\begin{array}{r} 1\frac{4}{9} \\ + 3\frac{2}{3} \\ \hline \end{array}$$

5.
$$\begin{array}{r} 3\frac{2}{3} \\ - 2\frac{1}{5} \\ \hline \end{array}$$

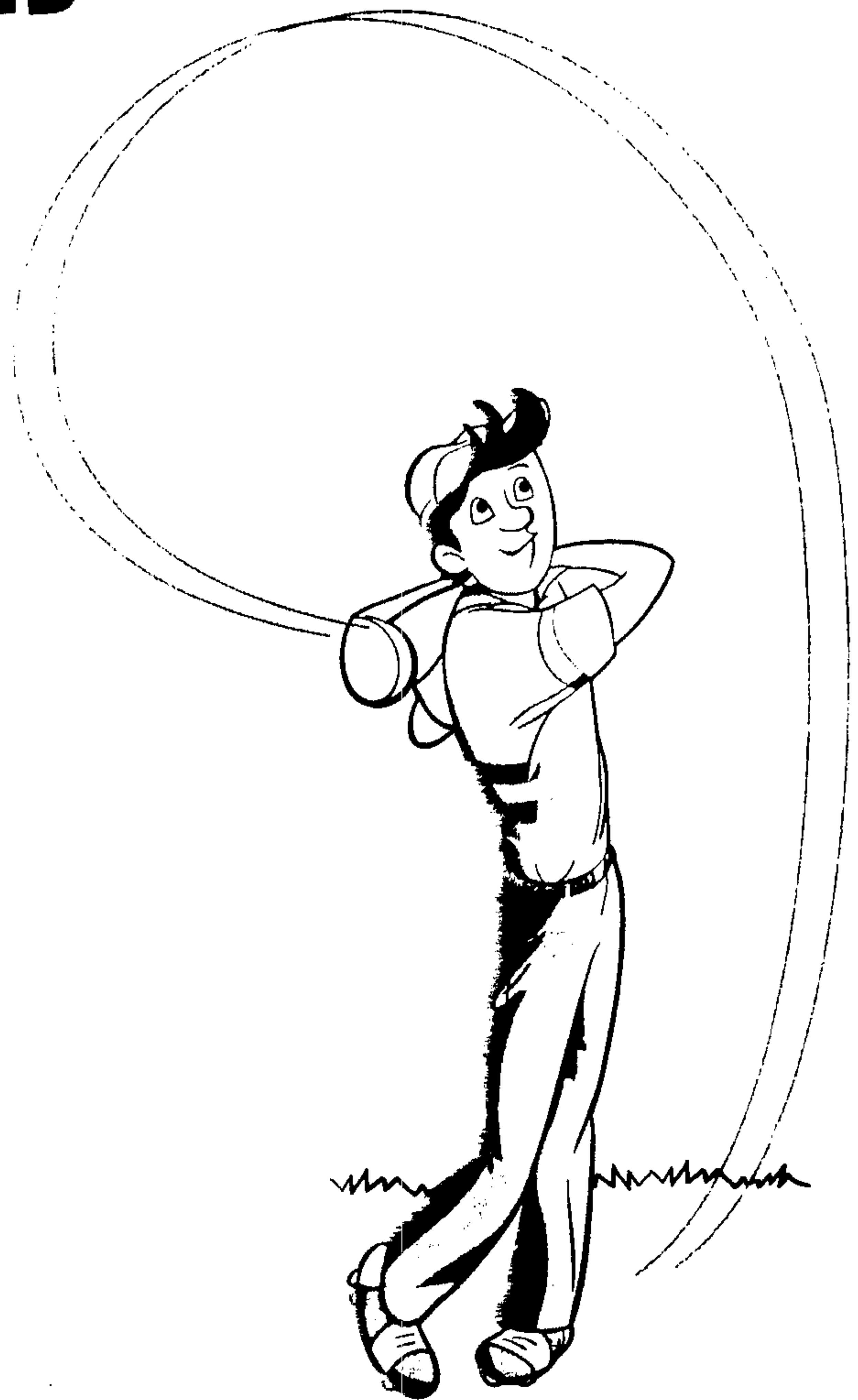
6.
$$\begin{array}{r} 4\frac{9}{10} \\ + 6\frac{4}{5} \\ \hline \end{array}$$

7.
$$\begin{array}{r} \frac{3}{4} \\ - \frac{2}{3} \\ \hline \end{array}$$

8.
$$\begin{array}{r} \frac{9}{16} \\ + \frac{7}{16} \\ \hline \end{array}$$

9.
$$\begin{array}{r} \frac{5}{9} \\ - \frac{1}{6} \\ \hline \end{array}$$

10.
$$\begin{array}{r} 1\frac{5}{6} \\ + 5\frac{2}{3} \\ \hline \end{array}$$



$\frac{39}{40}$

$5\frac{1}{9}$

$11\frac{7}{10}$

$\frac{1}{12}$

$11\frac{3}{10}$

$\frac{7}{18}$

$1\frac{7}{15}$

$7\frac{1}{2}$

1

$\frac{6}{11}$

$5\frac{1}{2}$

Swiss Sentences

Adding mixed numbers
with renaming

Name _____

Complete the cheesy number sentences below.

| | | | | |
|----------------|---|----------------|---|--|
| $7\frac{4}{5}$ | + | $2\frac{3}{8}$ | = | |
|----------------|---|----------------|---|--|

| |
|----------------|
| $2\frac{1}{2}$ |
|----------------|

+

| |
|-----------------|
| $2\frac{9}{10}$ |
|-----------------|

=

| | | | | |
|----------------|---|----------------|---|--|
| $5\frac{5}{6}$ | + | $3\frac{3}{4}$ | = | |
|----------------|---|----------------|---|--|

+

=

+

| |
|----------------|
| $3\frac{2}{5}$ |
|----------------|

=

| |
|----------------|
| $1\frac{2}{3}$ |
|----------------|

=

+

=

| |
|------------------|
| $4\frac{13}{16}$ |
|------------------|

+

=

+

+

| |
|----------------|
| $6\frac{1}{2}$ |
|----------------|

+

| |
|----------------|
| $5\frac{5}{8}$ |
|----------------|

=

+

=

+

| |
|-------------------|
| $10\frac{19}{20}$ |
|-------------------|

=

| |
|------------------|
| $7\frac{11}{12}$ |
|------------------|

=

| |
|------------------|
| $1\frac{47}{48}$ |
|------------------|

=

| |
|------------------|
| $1\frac{59}{60}$ |
|------------------|

+

=

Name _____

Score _____

Date _____



Find the sum or difference.

$$\begin{array}{r} 1) \quad 1\frac{1}{3} \\ - 1\frac{5}{16} \\ \hline \end{array}$$

$$\begin{array}{r} 2) \quad 2\frac{5}{11} \\ - 1\frac{1}{3} \\ \hline \end{array}$$

$$\begin{array}{r} 3) \quad 8\frac{12}{15} \\ - 6\frac{1}{3} \\ \hline \end{array}$$

$$\begin{array}{r} 4) \quad 5\frac{1}{2} \\ + 8\frac{1}{6} \\ \hline \end{array}$$

$$\begin{array}{r} 5) \quad 1\frac{5}{7} \\ + 7\frac{4}{11} \\ \hline \end{array}$$

$$\begin{array}{r} 6) \quad 9\frac{2}{3} \\ - 2\frac{2}{11} \\ \hline \end{array}$$

$$\begin{array}{r} 7) \quad 8\frac{9}{13} \\ + 8\frac{1}{3} \\ \hline \end{array}$$

$$\begin{array}{r} 8) \quad 9\frac{10}{14} \\ + 6\frac{6}{12} \\ \hline \end{array}$$

$$\begin{array}{r} 9) \quad 5\frac{2}{3} \\ - 2\frac{4}{5} \\ \hline \end{array}$$

$$\begin{array}{r} 10) \quad 5\frac{3}{4} \\ + 6\frac{10}{12} \\ \hline \end{array}$$

$$\begin{array}{r} 11) \quad 4\frac{6}{7} \\ + 9\frac{2}{9} \\ \hline \end{array}$$

$$\begin{array}{r} 12) \quad 2\frac{9}{11} \\ + 2\frac{4}{16} \\ \hline \end{array}$$

$$\begin{array}{r} 13) \quad 9\frac{5}{6} \\ - 3\frac{5}{8} \\ \hline \end{array}$$

$$\begin{array}{r} 14) \quad 7\frac{10}{15} \\ - 7\frac{5}{11} \\ \hline \end{array}$$

$$\begin{array}{r} 15) \quad 6\frac{1}{2} \\ - 3\frac{11}{14} \\ \hline \end{array}$$

$$\begin{array}{r} 16) \quad 6\frac{9}{14} \\ + 7\frac{6}{15} \\ \hline \end{array}$$

$$\begin{array}{r} 17) \quad 6\frac{6}{7} \\ + 8\frac{11}{12} \\ \hline \end{array}$$

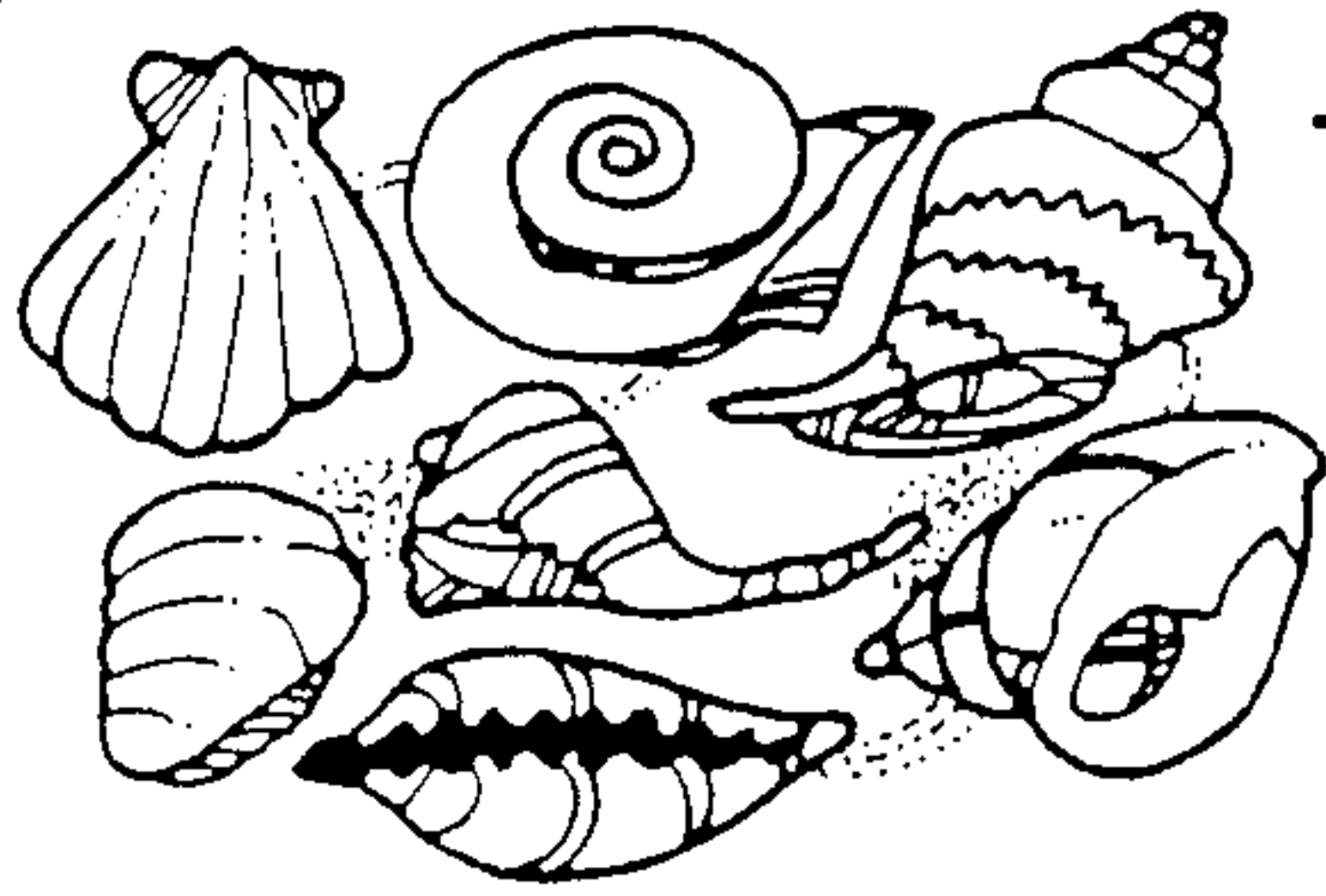
$$\begin{array}{r} 18) \quad 6\frac{2}{9} \\ - 2\frac{3}{15} \\ \hline \end{array}$$

$$\begin{array}{r} 19) \quad 9\frac{6}{9} \\ + 3\frac{2}{3} \\ \hline \end{array}$$

$$\begin{array}{r} 20) \quad 7\frac{2}{10} \\ - 3\frac{4}{12} \\ \hline \end{array}$$

Adding LIKE Fractions

5.6



Tanya had collected $\frac{2}{7}$ of her seashells in Florida and $\frac{3}{7}$ in California. The rest were given to her. What part of her shells had she collected herself?

To add fractions with the same denominator, add the numerators and keep the denominator.

$$\frac{2}{7} + \frac{3}{7} = \frac{2 + 3}{7} = \frac{5}{7}$$

▮ Add these fractions.

1. $\frac{5}{12} + \frac{6}{12} = \frac{11}{12}$

$\frac{1}{4} + \frac{2}{4} = \text{---}$

$\frac{3}{5} + \frac{1}{5} = \text{---}$

2. $\frac{3}{10} + \frac{6}{10} = \text{---}$

$\frac{1}{7} + \frac{4}{7} = \text{---}$

$\frac{2}{9} + \frac{5}{9} = \text{---}$

▮ Add and write the answer in simplest form.

3. $\frac{5}{12} + \frac{5}{12} = \text{---}$

$\frac{3}{10} + \frac{1}{10} = \text{---}$

$\frac{3}{16} + \frac{5}{16} = \text{---}$

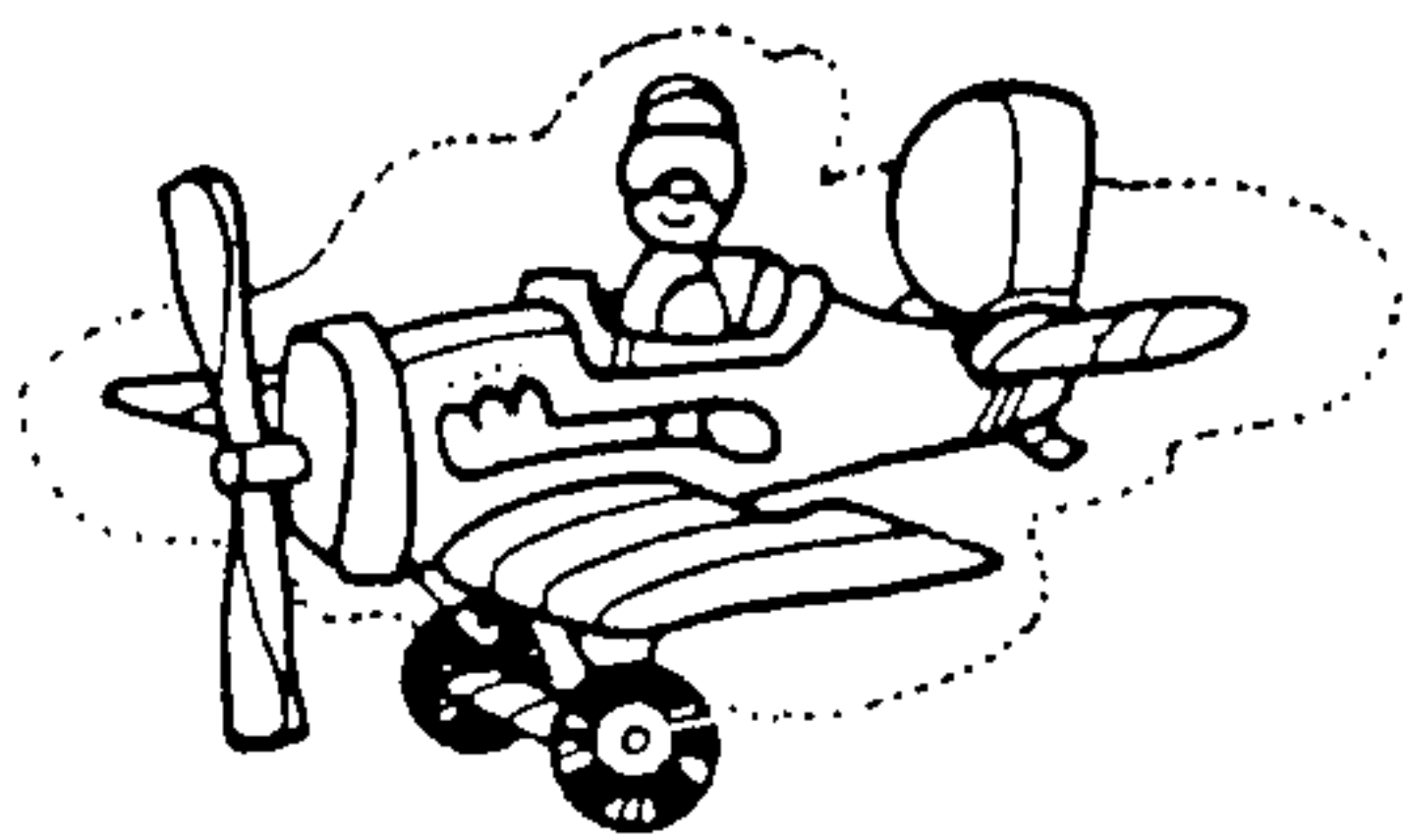
4. $\frac{2}{9} + \frac{4}{9} = \text{---}$

$\frac{1}{15} + \frac{2}{15} = \text{---}$

$\frac{40}{100} + \frac{10}{100} = \text{---}$

Skill: adding like fractions

Adding Unlike Fractions



For her model airplane, Betty saw that the tail was made of two parts. One was $\frac{1}{2}$ inch high and the other $\frac{1}{4}$ inch high. How high would the finished tail be?

You know how to add like fractions. To add unlike fractions, change to equivalent fractions that both have the same denominator. The smallest same denominator is called the least common denominator (LCD).

$$\frac{1}{2} = \frac{1 \times 2}{2 \times 2} = \frac{2}{4} \quad \frac{2}{4} + \frac{1}{4} = \frac{3}{4} \quad \text{The tail will be } \frac{3}{4} \text{ inch tall.}$$

🏠 Add and simplify your answer if you can.

1. $\frac{3}{4} + \frac{1}{8} =$

$$\frac{1}{3} + \frac{1}{6} =$$

$$\frac{1}{5} + \frac{1}{10} =$$

2. $\frac{1}{6} + \frac{3}{12} =$

$$\frac{1}{2} + \frac{3}{8} =$$

$$\frac{5}{12} + \frac{1}{3} =$$

Sometimes you must change both fractions to find the LCD.

🏠 Try these.

3. $\frac{1}{3} + \frac{1}{4} = \frac{4}{12} + \frac{3}{12} = \frac{7}{12}$

$$\frac{1}{5} + \frac{1}{2} =$$

4. $\frac{1}{10} + \frac{3}{4} =$

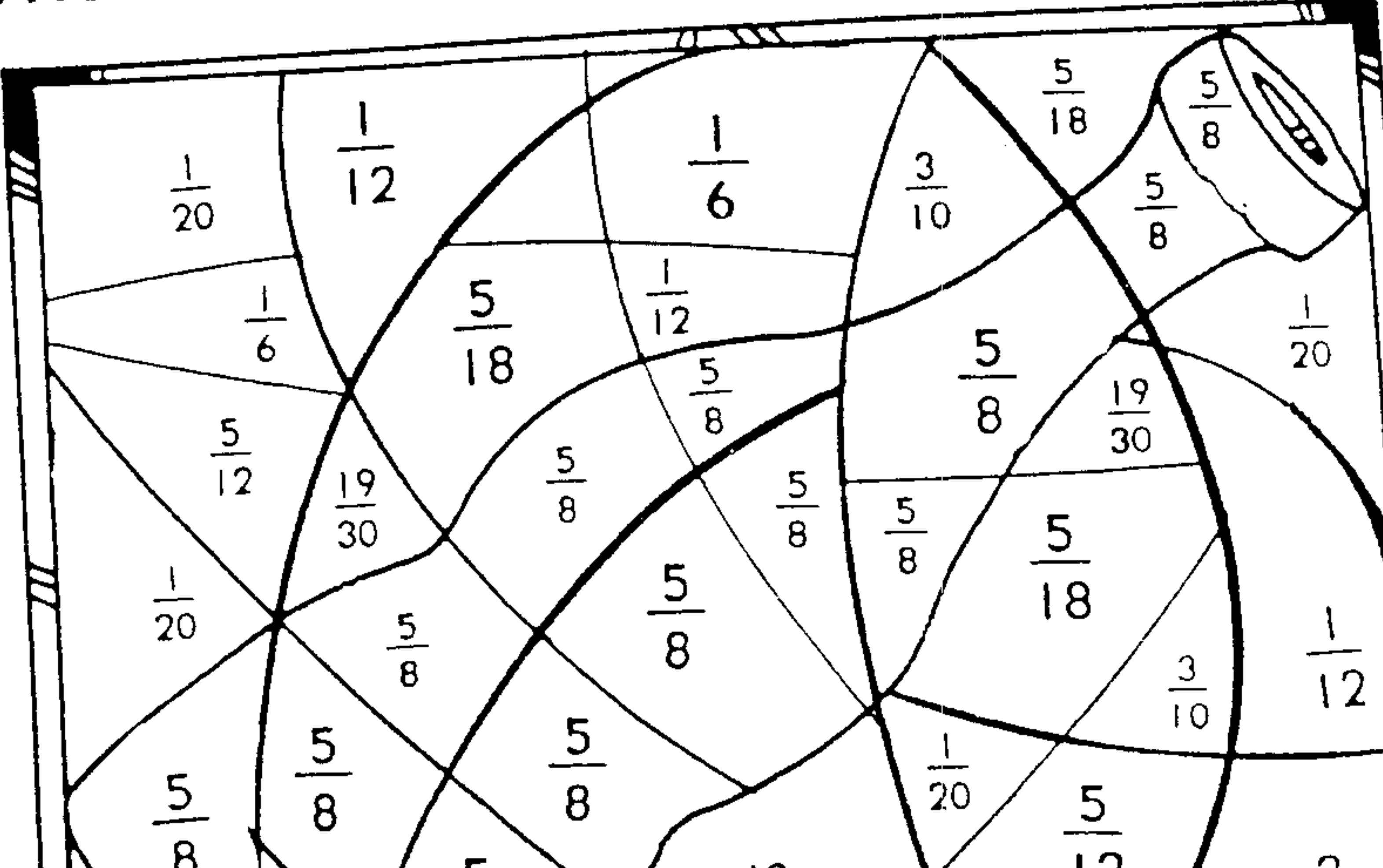
$$\frac{2}{3} + \frac{1}{5} =$$

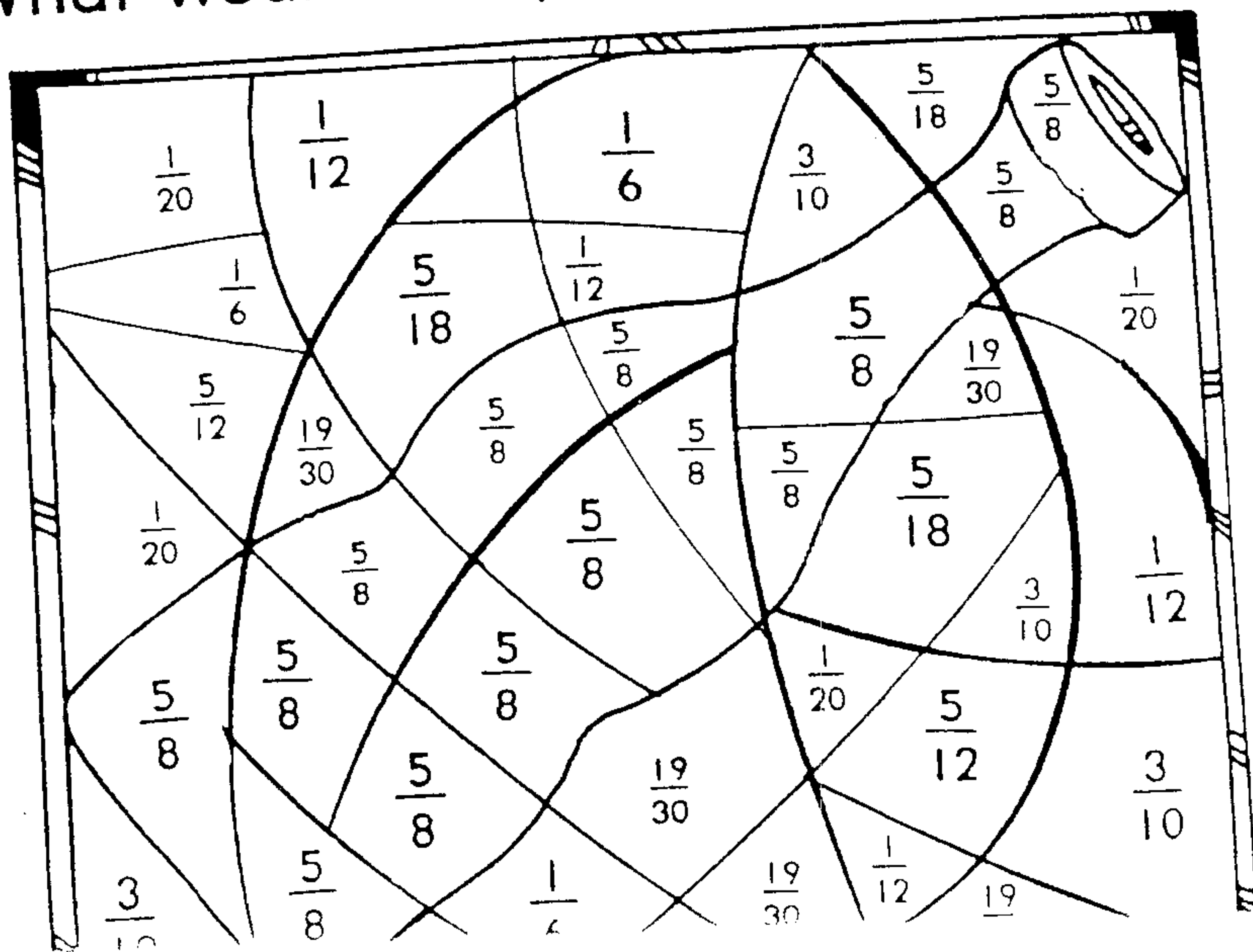
5. $\frac{1}{10} + \frac{1}{3} =$

$$\frac{1}{4} + \frac{1}{6} =$$

$$\frac{2}{5} = \frac{2 \times 4}{5 \times 4} = \frac{8}{20}$$
$$- \frac{1}{4} = \frac{1 \times 5}{4 \times 5} = \frac{5}{20}$$
$$\underline{\hspace{1cm}}$$
$$\frac{3}{20}$$

picture that answers the riddle.

| | | |
|--------------------------------|--|-------------------------------|
| $\frac{1}{2} - \frac{1}{5} =$ | $\frac{3}{4} - \frac{2}{3} =$ | $\frac{2}{3} - \frac{1}{4} =$ |
| red | blue | black |
| $\frac{7}{8} - \frac{1}{4} =$ | $\frac{2}{3} - \frac{1}{2} =$ | $\frac{7}{9} - \frac{1}{2} =$ |
| green | yellow | orange |
| $\frac{3}{10} - \frac{1}{4} =$ | What wears a cap but has no head? | |
| purple |  | |
| $\frac{4}{5} - \frac{1}{6} =$ | | |
| pink | | |



$$\frac{5}{12} - \frac{3}{12} = \frac{5-3}{12} = \frac{2}{12} \quad \text{simplify} \quad \frac{2}{12} = \frac{1}{6}$$
$$1. \quad \frac{2}{3} - \frac{1}{3} =$$

$$2. \quad \frac{4}{5} - \frac{2}{5} =$$

3. $\frac{7}{8} - \frac{1}{8} =$

4. $\frac{15}{16} - \frac{5}{16} =$

5. $\frac{8}{9} - \frac{2}{9} =$

6. $\frac{11}{14} - \frac{4}{14} =$

7. $\frac{17}{18} - \frac{2}{18} =$

8. $\frac{19}{28} - \frac{3}{28} =$

9. $\frac{11}{20} - \frac{6}{20} =$

10. $\frac{11}{12} - \frac{7}{12} =$

