

Name: _____ Date: _____

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Subtracting Mixed Numbers and Whole Numbers

Find your way through this maze of mixed numbers and whole numbers by subtracting either $1\frac{2}{3}$ or $2\frac{3}{4}$ to get from one number to the next. You can move up, down, right, left, or diagonally. You cannot use a path more than once. Good luck and have fun!

Start

$24\frac{1}{2}$	24	$22\frac{1}{3}$	$18\frac{11}{12}$	$13\frac{5}{12}$	$11\frac{3}{4}$
$21\frac{3}{4}$	$20\frac{3}{4}$	$20\frac{7}{12}$	$16\frac{1}{6}$	$7\frac{2}{3}$	$10\frac{2}{3}$
18	$20\frac{1}{12}$	$18\frac{7}{12}$	$14\frac{1}{2}$	6	9
$17\frac{1}{3}$	$14\frac{7}{12}$	$18\frac{5}{12}$	$11\frac{3}{4}$	$4\frac{1}{3}$	$7\frac{1}{3}$
16	$11\frac{5}{6}$	$15\frac{2}{3}$	14	$11\frac{1}{4}$	8
$13\frac{1}{4}$	$10\frac{1}{2}$	$7\frac{3}{4}$	5	$9\frac{7}{12}$	$3\frac{1}{2}$
$10\frac{1}{2}$	$7\frac{3}{4}$	$8\frac{1}{2}$	$7\frac{11}{12}$	$5\frac{1}{6}$	$\frac{3}{4}$

Finish

Thinking Cap



Do you think there is more than one way to find your way through this maze? Explain your answer.

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Subtracting Mixed Numbers and Whole Numbers

Topic: Subtracting Mixed Numbers and Whole Numbers with Like and Unlike Denominators

Objective: To use the calculator to subtract mixed numbers and whole numbers with like and unlike denominators.

NCTM Standards: Communication, Computation and Estimation

Using the Activity

Students use the calculator in this activity to subtract whole numbers and mixed numbers with like and unlike denominators.

- The **M+** and **MR** keys can be used to enter a number into the memory of the calculator.
- The **a** and **b/c** keys can be used to enter mixed numbers.

Example Start with $24\frac{1}{2}$. Since you will need to subtract two different mixed numbers from $24\frac{1}{2}$, you can enter it into the memory of the calculator and simply recall it to subtract the second time. To enter $24\frac{1}{2}$ into memory and subtract $1\frac{2}{3}$, press 24 **a** 1 **b/c** 2 **M+** **-** 1 **a** 2 **b/c** 3 **=** $22\frac{5}{6}$. Then to subtract $2\frac{3}{4}$, press **MR** **-** 2 **a** 3 **b/c** 4 **=** $21\frac{3}{4}$. Since $21\frac{3}{4}$ is the only difference that can be connected to $24\frac{1}{2}$, draw a line from $24\frac{1}{2}$ to $21\frac{3}{4}$. Then use the calculator to subtract $1\frac{2}{3}$ and $2\frac{3}{4}$ from $21\frac{3}{4}$ to determine where to draw the next line. Continue in a similar manner until a line is drawn to $\frac{3}{4}$.

Assessment Encourage students to estimate each difference before they actually use the calculator to find it.

Answer

Lines should be drawn from $24\frac{1}{2}$ to $21\frac{3}{4}$ to $20\frac{1}{12}$ to $18\frac{5}{12}$ to $15\frac{2}{3}$ to 14 to $11\frac{1}{4}$ to $9\frac{7}{12}$ to $7\frac{11}{12}$ to $5\frac{1}{6}$ to $3\frac{1}{2}$ to $\frac{3}{4}$.

Thinking Cap

As an extension, students can determine whether there is more than one path through the maze. To do this, they must examine every line they have drawn to be sure it cannot be drawn in a different way.

Answer

No, in each case there is only one way the line can be drawn to get to one of the possible differences.