

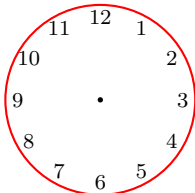
THE UNIVERSITY OF AKRON
Theoretical and Applied Mathematics

**Some Exercises in Combining
Fractions**

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1. Adding and Subtracting Fractions

For the fifth grade, the concentration—at least in my son's class—is on adding and subtracting fractions where the denominators are divisible by 12. The class uses a clock face to help them perform the operations.



For example, $1/12$ is one-twelfth of the way around the clock, or one movement of the hour hand; $1/6 = 2/12$ is two movements of the hour hand; $1/4 = 3/12$ is three movements of the hour hand; $1/3 = 4/12$ is four movements, etc.

You can add by adding the movements of the hour hand, counting clockwise, subtraction is performed by counting movements counter-clockwise.

Perform the indicated operations.

1. $\frac{1}{3} + \frac{1}{4} = \text{---}$

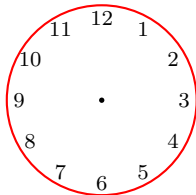
2. $\frac{1}{3} - \frac{1}{4} = \text{---}$

3. $\frac{1}{3} + \frac{1}{2} = \text{---}$

4. $\frac{2}{3} - \frac{1}{6} = \text{---}$

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

Count the clock movements by moving your mouse pointer around the clock.



Answers:

Perform the indicated operations.

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

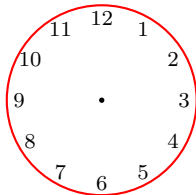
2. $\frac{1}{3} + \frac{1}{12} = \text{---}$

3. $\frac{3}{4} + \frac{2}{3} = \text{---}$

4. $\frac{1}{2} - \frac{1}{6} = \text{---}$

5. $\frac{5}{12} + \frac{2}{3} = \text{---}$

Count the clock movements by moving your mouse pointer around the clock.



Answers:

2. Testing Multiplication and Division

Here are some multiplications and divisions for testing purposes.

Perform the indicated operations.

1. $\frac{1}{2} \times \frac{3}{5} = \text{---}$

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

2. $\frac{3}{5} \div \frac{1}{2} = \text{---}$

5. $-4 - \frac{2}{3} = \text{---}$

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

6. $\frac{2}{3} \times \frac{5}{6} = \text{---}$

Answers: