Adding Fractions with Different Denominators

For each question:

- Write down the answer.
- Show any workings clearly.
- Give your answer in its simplest form.

1. $\frac{5}{7} + \frac{1}{6} =$ ☐

2. $\frac{2}{5} + \frac{3}{11} =$ ☐

3. $\frac{1}{2} + \frac{3}{8} =$ ☐

4. $\frac{1}{3} + \frac{3}{5} =$ ☐

5. $\frac{3}{10} + \frac{2}{6} =$ ☐

6. $\frac{4}{15} + \frac{1}{2} =$ ☐

7. $\frac{2}{10} + \frac{2}{3} =$ ☐

8. Billy says that $\frac{1}{3} + \frac{5}{8}$ is $\frac{6}{11}$.
Explain why Billy isn't correct and give the correct answer.

9. Show how $\frac{2}{5} + \frac{4}{10}$ is the same as $\frac{4}{5}$.

10. Paul says that $\frac{3}{9} + \frac{2}{6}$ is $\frac{12}{18}$ which is equivalent to $\frac{2}{3}$.
Laura says that the answer is $\frac{1}{3}$.
Who is correct and why?

Adding Fractions with Different Denominators **Answers**

1. $\frac{37}{42}$

2. $\frac{37}{55}$

3. $\frac{7}{8}$

4. $\frac{14}{15}$

5. $\frac{19}{30}$

6. $\frac{23}{30}$

7. $\frac{26}{30} = \frac{13}{15}$

8. Billy's answer is incorrect because you can't simply add the numerators and denominators together; you have to find a common denominator first. The answer should be $\frac{23}{24}$.

9. $\frac{2}{5} + \frac{4}{10} = \frac{4}{10} + \frac{4}{10}$.
   $\frac{4}{10} + \frac{4}{10} = \frac{8}{10}$.
   The highest common factor for 8 and 10 is 2.
   $\frac{8}{10}$ is equivalent to $\frac{4}{5}$.

10. Paul is correct.
    $\frac{3}{9} + \frac{2}{6} = \frac{6}{18} + \frac{6}{18}$.
    $\frac{6}{18} + \frac{6}{18} = \frac{12}{18}$.
    The highest common factor for 6 and 18 is 6.
    $\frac{12}{18} = \frac{2}{3}$