## Check Your Answers on Subtracting Fractions!

1. $\frac{1}{2} \quad\left(\frac{3}{4}-\frac{1}{4}=\frac{2}{4}=\frac{1}{2}\right)$ $\square$
$\square$ or $\square$ - $\square$ $=$ $\square$ $=$ $\square$
2. $\frac{1}{6}\left(\frac{1}{3}-\frac{1}{6}=\frac{2}{6}-\frac{1}{6}=\frac{1}{6}\right)$

$=$

$\square$
3. $\frac{1}{4}$ mile $\left(\frac{3}{4}\right.$ mile $-\frac{1}{2}$ mile $)$
4. $1 \frac{1}{3} \operatorname{cup}$
5. $\frac{2}{5}\left(\frac{7}{10}-\frac{3}{10}=\frac{4}{10} \div \frac{2}{2}=\frac{2}{5}\right)$

Jack:


$$
\left(\frac{3}{4} \text { mile }-\frac{2}{4} \text { mile }=\frac{1}{4} \text { mile }\right)
$$



Subtracting requires "like terms" or common denominators. When the denominators are the same, combine the numerators. Don't forget to simplify your answer!
"How much more..." indicates subtraction although in this case it might be easier to consider how much sugar should be added to reach 2 cups.
6. $\frac{1}{6}\left(\frac{5}{12}-\frac{1}{4}=\frac{5}{12}-\frac{1}{4} \cdot \frac{3}{3}=\frac{5}{12}-\frac{3}{12}=\frac{2}{12} \div \frac{2}{2}=\frac{1}{6}\right)$

It may be necessary to produce a common denominator (the least common multiple of the 2 denominators) by multiplying by some form of 1 (which does not change the value) before combining the numerators.
7. $\frac{7}{30}\left(\frac{5}{6}-\frac{3}{5}=\frac{5}{6} \cdot \frac{5}{5}-\frac{3}{5} \cdot \frac{6}{6}=\frac{25}{30}-\frac{18}{30}=\frac{7}{30}\right)$

In order to subtract these fractions, it is necessary to produce equivalent fractions with the same denominator.
8. $\frac{11}{36}\left(\frac{8}{9}-\frac{7}{12}=\frac{8}{9} \cdot \frac{4}{4}-\frac{7}{12} \cdot \frac{3}{3}=\frac{32}{36}-\frac{21}{36}=\frac{11}{36}\right)$

Although 108 is a common denominator, it is usually simpler to determine the least common denominator.
9. $\frac{1}{12}\left(\frac{11}{15}-\frac{13}{20}=\frac{11}{15} \cdot \frac{4}{4}-\frac{13}{20} \cdot \frac{3}{3}=\frac{44}{60}-\frac{39}{60}=\frac{5}{60}=\frac{1}{12}\right)$

It can be challenging to find the least common denominator which is the least common multiple between those two denominators.
10. $1 \frac{7}{24}\left(3 \frac{1}{8}-1 \frac{5}{6}=\frac{25}{8}-\frac{11}{6}=\frac{25}{8} \cdot \frac{3}{3}-\frac{11}{6} \cdot \frac{4}{4}=\frac{75}{24}-\frac{44}{24}=\frac{31}{24}=1 \frac{7}{24}\right)$

Don't forget to change mixed numbers to improper fractions before producing common denominators!

## Perfect score? Yes! You've got this!! You're ready to move on to the next section!!!

