More Fractions

1. Simplify each expression.

a) $\frac{x}{2} + \left(\frac{1}{2}\right)^2$

b) $\frac{3}{8} \div \left(-\frac{5}{4}\right) + \frac{2}{3}$

c) $\frac{5}{6} - \left(-\frac{2}{3}\right) + 3$

d) $\frac{4}{x} + \left(-\frac{2}{3}\right)$

2. Simplify each expression.

a) $3 \cdot \frac{5}{4} - \frac{2}{3}$ b) $\frac{4}{3} - \left(\frac{1}{2}\right)^3 \div \frac{3}{4}$

c) $\frac{3}{2} - \left|-\frac{5}{6}\right|$ d) $4 - \left(\frac{2}{3}\right)^3 \div \frac{4}{3}$

More Fractions

1. Simplify each expression.

a) $\frac{x}{2} + \left(\frac{1}{2}\right)^2$

$\frac{x}{2} + \frac{1}{4}$ LCD=4

$\frac{x}{2}\left(\frac{2}{2}\right) + \frac{1}{4}$

$\frac{2x}{4} + \frac{1}{4}$

$\boxed{\frac{2x+1}{4}}$

b) $\frac{3}{8} \div \left(-\frac{5}{4}\right) + \frac{2}{3}$

$\frac{3}{\cancel{8}_2} \cdot \left(-\frac{\cancel{4}^1}{5}\right) + \frac{2}{3}$

$-\frac{3}{10} + \frac{2}{3}$ LCD=30

$-\frac{3}{10}\left(\frac{3}{3}\right) + \frac{2}{3}\left(\frac{10}{10}\right)$

$-\frac{9}{30} + \frac{20}{30}$

$\boxed{\frac{11}{30}}$

c) $\frac{5}{6} - \left(-\frac{2}{3}\right) + 3$

$\frac{5}{6} + \frac{2}{3} + \frac{3}{1}$ LCD=6

$\frac{5}{6} + \frac{2}{3}\left(\frac{2}{2}\right) + \frac{3}{1}\left(\frac{6}{6}\right)$

$\frac{5}{6} + \frac{4}{6} + \frac{18}{6}$

$\frac{5+4+18}{6}$

$\frac{27}{6}$

$\boxed{\frac{9}{2}}$

d) $\frac{4}{x} + \left(-\frac{2}{3}\right)$

$\frac{4}{x} - \frac{2}{3}$ LCD=3x

$\frac{4}{x}\left(\frac{3}{3}\right) - \frac{2}{3}\left(\frac{x}{x}\right)$

$\frac{12}{3x} - \frac{2x}{3x}$

$\boxed{\frac{12-2x}{3x}}$

2. Simplify each expression.

a) $3 \cdot \frac{5}{4} - \frac{2}{3}$

$\frac{3}{1} \cdot \frac{5}{4} - \frac{2}{3}$

$\frac{15}{4} - \frac{2}{3}$ LCD=12

$\frac{15}{4}\left(\frac{3}{3}\right) - \frac{2}{3}\left(\frac{4}{4}\right)$

$\frac{45}{12} - \frac{8}{12}$

$\boxed{\frac{37}{12}}$

b) $\frac{4}{3} - \left(\frac{1}{2}\right)^3 \div \frac{3}{4}$

$\frac{4}{3} - \frac{1}{8} \cdot \frac{4}{3}$

$\frac{4}{3} - \frac{1}{6}$ LCD=6

$\frac{4}{3}\left(\frac{2}{2}\right) - \frac{1}{6}$

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

$\boxed{\frac{7}{6}}$

c) $\frac{3}{2} - \left|-\frac{5}{6}\right|$

$\frac{3}{2} - \frac{5}{6}$ LCD=6

$\frac{3}{2}\left(\frac{3}{3}\right) - \frac{5}{6}$

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

$\frac{4}{6}$

$\boxed{\frac{2}{3}}$

d) $4 - \left(\frac{2}{3}\right)^3 \div \frac{4}{3}$

$\frac{4}{1} - \frac{8}{27} \cdot \frac{3}{4}$

$\frac{4}{1} - \frac{2}{9}$ LCD=9

$\frac{4}{1}\left(\frac{9}{9}\right) - \frac{2}{9}$

$\frac{36}{9} - \frac{2}{9}$

$\boxed{\frac{34}{9}}$