

1. Calculate.

a) $\frac{2}{3} + \frac{7}{12}$

$= \frac{8}{12} + \frac{7}{12} = \frac{15}{12} = 3$

$\frac{5}{4} = 1\frac{1}{4}$

b) $\frac{4}{5} - \frac{2}{3}$

$= \frac{12}{15} - \frac{10}{15}$

$= \frac{2}{15}$

c) $\frac{1}{2} + \frac{3}{7}$

$= \frac{7}{14} + \frac{6}{14}$

$= \frac{13}{14}$

d) $\frac{5}{6} - \frac{3}{4}$

$= \frac{10}{12} - \frac{9}{12}$

$= \frac{1}{12}$

e) $3 \times \frac{3}{4}$

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

f) $8 \times \frac{1}{5}$

$= \frac{8}{5} = 1\frac{3}{5}$

g) $\frac{1}{4} \times \frac{3}{5}$

$= \frac{3}{20}$

h) $\frac{3}{5} \times \frac{2}{3}$

$= \frac{2}{5}$

i) $\frac{1}{3} \div \frac{2}{1}$

$= \frac{1}{3} \times \frac{1}{2}$

$= \frac{1}{6}$

j) $\frac{2}{3} \div \frac{4}{1}$

$= \frac{2}{3} \times \frac{1}{4}$

$= \frac{1}{6}$

k) $\frac{2}{9} \div \frac{7}{9}$

$= \frac{2}{7}$

l) $\frac{5}{6} \div \frac{2}{3}$

$= \frac{5}{6} \times \frac{3}{2}$

or $\frac{5}{2} \times \frac{3}{2}$

$= \frac{5}{4} = 1\frac{1}{4}$

2. Calculate.

a) $2\frac{2}{3} + 1\frac{1}{6}$

$= \frac{8}{3} + \frac{7}{6}$

$= \frac{16}{6} + \frac{7}{6}$

$= \frac{23}{6} = 3\frac{5}{6}$

b) $3\frac{1}{4} - 1\frac{1}{2}$

$= \frac{13}{4} - \frac{3}{2}$

$= \frac{13}{4} - \frac{6}{4}$

$= \frac{7}{4} = 1\frac{3}{4}$

c) $2\frac{2}{3} \times 1\frac{1}{6}$

$= \frac{8}{3} \times \frac{7}{6}$

$= \frac{28}{9}$

$= 3\frac{1}{9}$

d) $3\frac{1}{4} \div 1\frac{1}{2}$

$= \frac{13}{4} \div \frac{3}{2}$

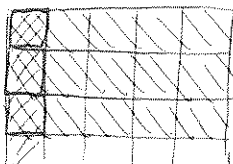
$= \frac{13}{4} \times \frac{2}{3}$

$= \frac{13}{6} = 2\frac{1}{6}$

or $\frac{13}{4} \times \frac{2}{3}$

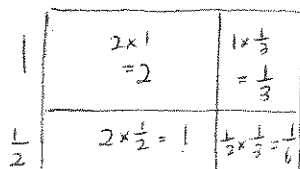
3. Draw and use a diagram to find the solution to the following problems:

a) $\frac{1}{5} \times \frac{3}{4}$



$= \frac{3}{20}$

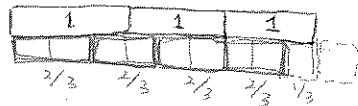
b) $2\frac{1}{3} \times 1\frac{1}{2}$



$2 + 1 + \frac{1}{3} + \frac{1}{6}$

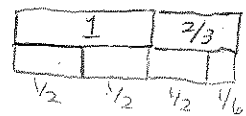
$= 3 + \frac{2}{6} + \frac{1}{6} = 3\frac{3}{6} = 3\frac{1}{2}$

c) $3 \div \frac{2}{3}$



$= 4\frac{1}{2}$

d) $1\frac{2}{3} \div \frac{1}{2}$



$= 3\frac{1}{3}$

4. Karen goes to swimming practice for $1\frac{1}{3}$ hours each day. In the morning, she has $\frac{2}{3}$ hours of practice. How many hours of practice does she have in the afternoon?

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

5. At the school's Spring Fair, the student government sold $5\frac{1}{3}$ Hawaiian pizzas, $6\frac{3}{4}$ pepperoni pizzas and $4\frac{5}{6}$ cheese pizzas. How many pizzas did they sell all together?

$$\begin{aligned} 5\frac{1}{3} + 6\frac{3}{4} + 4\frac{5}{6} &= \frac{16 \times 4}{3 \times 4} + \frac{27 \times 3}{4 \times 3} + \frac{29 \times 2}{6 \times 2} \\ &= \frac{64}{12} + \frac{81}{12} + \frac{58}{12} = \frac{203}{12} = \boxed{16\frac{11}{12} \text{ pizzas}} \end{aligned}$$

6. At the age of 4, the average person is about $\frac{3}{5}$ as tall as they will be as an adult. At birth, the average person is about $\frac{1}{2}$ as tall as they will be at age 4. For the average person, what fraction of their height at birth is their height as an adult?

$$\frac{3}{5} \times \frac{1}{2} = \boxed{\frac{3}{10} \text{ of the height}}$$

7. It took Sven $9\frac{3}{4}$ minutes to ski up a slope on a cross-country trail and only $2\frac{1}{4}$ minutes to ski back down. How many times faster did he ski down as he skied up?

$$9\frac{3}{4} \div 2\frac{1}{4} = \frac{39}{4} \div \frac{9}{4} = \frac{39}{9} = 4\frac{3}{9} = \boxed{4\frac{1}{3} \text{ times faster}}$$

8. A corner store buys goods at the wholesale price, and sells them for $\frac{7}{5}$ of the wholesale price. The wholesale price of a case of 12 cans of soup is \$15. For how much does the store sell 1 can of soup?

$$\begin{aligned} \frac{\overset{3}{\$15} \times 7}{15} &= \$21 \div 12 \text{ cans} \\ &= \frac{21}{12} = \frac{7}{4} = \$\frac{7}{4} / \text{can} \\ &= \boxed{\$1.75 / \text{can}} \end{aligned}$$