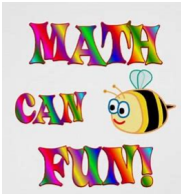


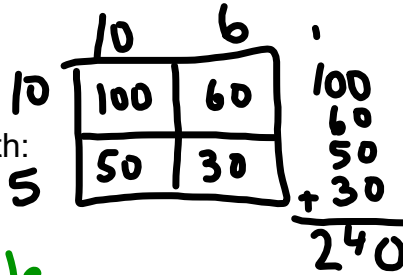
WARM UP GRADE 7



Use Mental Math:

a) 16×15

half \downarrow double \downarrow
 $8 \times 30 = 240$



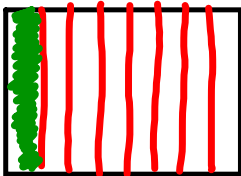
$$\begin{array}{r} 5.99 \\ - 2.49 \\ \hline 3.50 \end{array}$$

b) $\$5.99 - \2.49

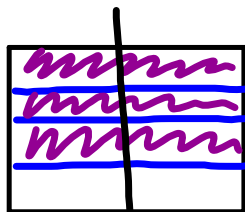
$$\$6 - 2 = 4.00 - 0.5 \approx 3.50$$

Add the following: Using fraction blocks

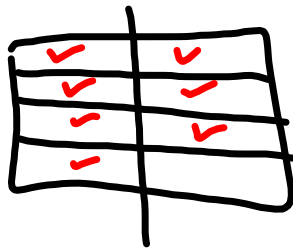
a) $\frac{1}{8} + \frac{3}{4} \times 2$



$$\frac{1}{8}$$

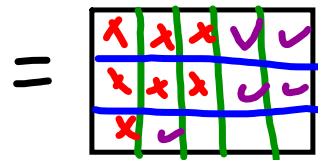
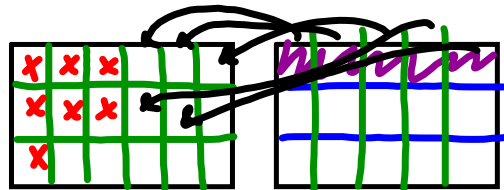


$$\frac{6}{8} = \frac{7}{8}$$



b) $\frac{7}{15} + \frac{1}{3} \times 5$

$$\frac{7}{15} + \frac{5}{15} = \frac{12}{15}$$



Homework Solutions

on next page

1. Model the following to solve the addition questions.

(a) $\frac{8}{15} + \frac{2}{15}$

(b) $\frac{1}{7} + \frac{5}{7}$

(c) $\frac{7}{10} + \frac{2}{10}$

(d) $\frac{9}{15} + \frac{6}{15}$

(e) $\frac{4}{5} + \frac{3}{5}$

(f) $\frac{6}{8} + \frac{5}{8}$

(g) $\frac{7}{8} + \frac{5}{8}$

(h) $\frac{1}{8} + \frac{1}{2}$

(i) $\frac{2}{6} + \frac{1}{2}$

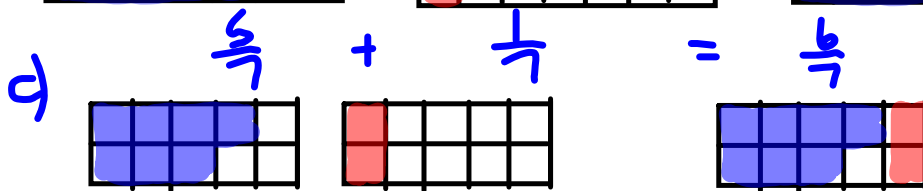
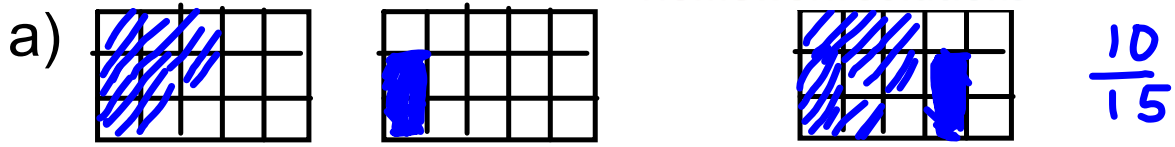
(j) $\frac{5}{9} + \frac{1}{3}$

(k) $\frac{1}{2} + \frac{1}{4}$

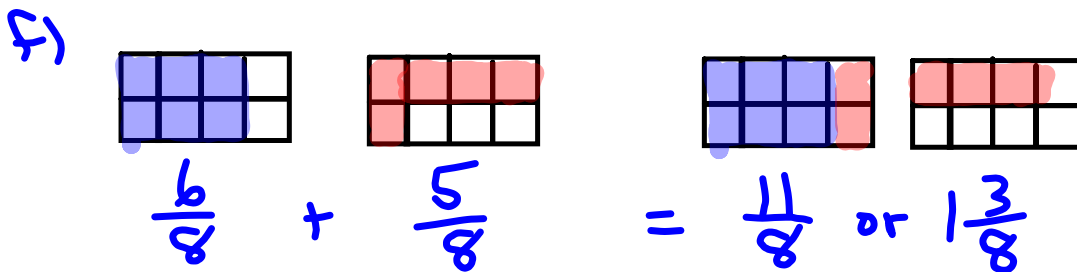
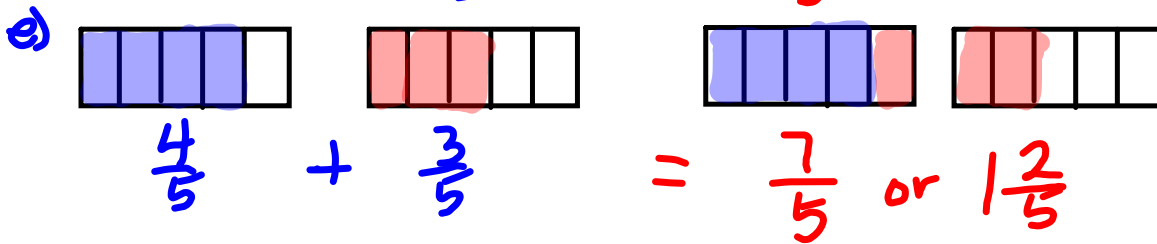
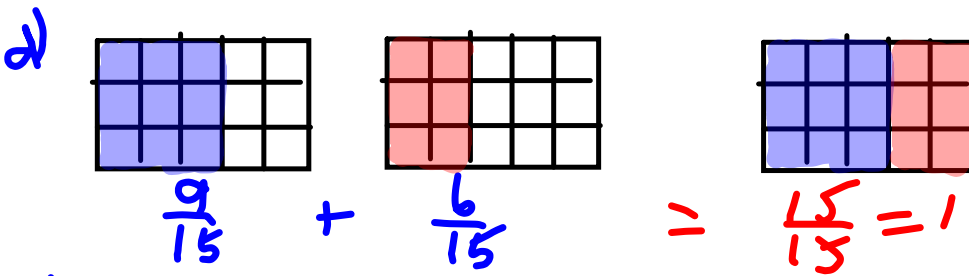
(l) $\frac{3}{10} + \frac{2}{5}$

Page 180 #4, #5, #7

Homework Solutions



$\frac{7}{10} + \frac{2}{10} = \frac{9}{10}$



Homework Solutions

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$$\frac{7}{10} + \frac{5}{10} = \frac{12}{10} \text{ or } \frac{14}{10} \text{ or } 1\frac{1}{2}$$

$$\frac{2}{10} + \frac{8}{10} = \frac{10}{10}$$

30

$$\frac{4}{6} + \frac{2}{6} = \frac{6}{6}$$

31

$$\frac{6}{12} + \frac{6}{12} = \frac{10}{12}$$

$$\frac{5}{9} + \frac{3}{9} = \frac{8}{9}$$

32

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

33

$$\frac{6}{10} + \frac{4}{10} = \frac{7}{10}$$

Homework Solutions

$$4. \text{ i) } \frac{1}{5} + \frac{1}{5} = \frac{2}{5} \quad \text{ii) } \frac{2}{3} + \frac{1}{3} = \frac{3}{3} \text{ or } 1$$

$$\text{iii) } \frac{4}{10} + \frac{3}{10} = \frac{7}{10} \quad \text{iv) } \frac{1}{6} + \frac{3}{6} = \frac{4}{6} \text{ or } \frac{2}{3}$$

b) If you have like denominators, you add the fractions by adding the numerators and keeping the same denominator.

$$5 \text{ a) } \frac{1}{4} + \frac{2}{4} \quad \text{less than } 1. \text{ since it is } \frac{3}{4}$$

$$\text{b) } \frac{2}{5} + \frac{7}{5} \quad \text{greater than } 1, \text{ since } \frac{7}{5} > 1$$

$$\text{c) } \frac{3}{4} + \frac{1}{4} = \frac{4}{4} \text{ which is } 1 \text{ so it equals } 1$$

$$\text{d) } \frac{1}{10} + \frac{3}{10} < 1, \quad \frac{1}{10} + \frac{3}{10} = \frac{4}{10}$$

Pass out and have students make their own fraction strips.
Worth 10 marks in class tomorrow.

$\frac{1}{9} \rightarrow$ Peach / Beige / Skin Color

Adding Fractions without Modeling or
Using number lines

When you want to add fractions that do not have the same denominators without modeling, the first thing you have to do is to find equivalent fractions with the same denominators.

1. Look at the denominators and find the LCM (lowest common multiple)
2. Get equivalent fractions with the new denominators
3. Add the numerators and the denominators will stay the same.

Examples: ^{remember} List the factors of each denominator

$$\begin{array}{l} 4 \times \frac{3}{5} + \frac{2}{9} \times 5 \\ 9 \times \frac{3}{5} + \frac{2}{9} \times 5 \end{array}$$

5: 5, 10, 15, 20, 25, 30, 35, 40, **45**, 50, 55, 60...

9: 9, 18, 27, 36, **45**, 81....

you need to show this

$$= \frac{27}{45} + \frac{10}{45}$$

$$= \frac{37}{45}$$

LCM is **45** → new denominator

Your Turn

$$\text{a) } \frac{2 \times 3}{2 \times 15} + \frac{1 \times 5}{6 \times 5}$$

$$= \frac{6}{30} + \frac{5}{30}$$

$$= \frac{11}{30}$$

$$\text{b) } \frac{2 \times 7}{2 \times 12} + \frac{3 \times 3}{8 \times 3}$$

$$= \frac{14}{24} + \frac{9}{24}$$

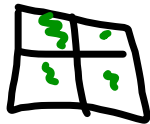
$$= \frac{23}{24}$$

$$\begin{array}{r} \times \\ \hline 9 \\ \times \\ \hline 9 \end{array}$$

Reduce

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

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



1 whole

$$\begin{array}{l} \times 5 \\ \times 5 \end{array} \frac{1}{2} + \frac{3}{10} \begin{array}{l} \times 1 \\ \times 1 \end{array}$$

$$\frac{5}{10} + \frac{3}{10} = \frac{8}{10}$$


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

$$\begin{array}{l} 7 \times \\ 7 \times \end{array} \frac{1}{3} + \frac{1}{7} \begin{array}{l} \times 3 \\ \times 3 \end{array}$$

$$\frac{7}{21} + \frac{3}{21} = \frac{10}{21}$$

$$\begin{array}{l} \times 45 \\ \times 45 \end{array} \frac{5}{6} + \frac{3}{8} \begin{array}{l} \times 3 \\ \times 3 \end{array}$$

$$\frac{20}{24} + \frac{9}{24} = 1 \frac{5}{24}$$

$$\frac{29}{24}$$


Class/Homework

Page 188 - 189

#2(a,d),

#3(no number lines just add), **ad**

#4(don't estimate just add), **ad**

#5,

#6,

#7

2d

$$\frac{6}{8} \stackrel{\div 2}{=} \frac{3}{4} = \frac{15}{\square}$$

Reduce

$$\frac{3}{4} = \frac{15}{\square}$$



Add

a) $\frac{4}{5} + \frac{1}{10}$

b) $\frac{3}{12} + \frac{1}{4}$

c) $\frac{7}{10} + \frac{3}{20}$

d) $\frac{6}{25} + \frac{11}{50}$

e) $\frac{1}{3} + \frac{1}{4}$

f) $\frac{9}{10} + \frac{1}{6}$

g) $\frac{1}{2} + \frac{6}{11}$

h) $\frac{3}{4} + \frac{3}{10}$

i) $\frac{5}{7} + \frac{2}{3}$

j) $\frac{11}{20} + \frac{7}{30}$

Add

a) $\frac{4}{5} + \frac{1}{10}$

$$\frac{8}{10} + \frac{1}{10} = \frac{9}{10}$$

b) $\frac{3}{12} + \frac{1}{4}$

$$\frac{3}{12} + \frac{3}{12} = \frac{6}{12}$$

c) $\frac{7}{10} + \frac{3}{20}$

$$\frac{14}{20} + \frac{3}{20} = \frac{17}{20}$$

d) $\frac{6}{25} + \frac{11}{50}$

$$\frac{12}{50} + \frac{11}{50} = \frac{23}{50}$$

e) $\frac{1}{3} + \frac{1}{4}$

$$\frac{4}{12} + \frac{3}{12} = \frac{7}{12}$$

f) $\frac{9}{10} + \frac{1}{6}$

$$\frac{27}{30} + \frac{5}{30} = \frac{32}{30}$$

g) $\frac{1}{2} + \frac{6}{11}$

$$\frac{11}{22} + \frac{12}{22} = \frac{23}{22}$$

h) $\frac{3}{4} + \frac{3}{10}$

$$\frac{15}{20} + \frac{6}{20} = \frac{21}{20}$$

i) $\frac{5}{7} + \frac{2}{3}$

$$\frac{15}{21} + \frac{14}{21} = \frac{29}{21}$$

j) $\frac{11}{20} + \frac{7}{30}$

$$\frac{33}{60} + \frac{14}{60} = \frac{47}{60}$$

Homework

Pg 184 # 7-12, Refined