



WARM UP GRADE 7



Use Mental Math:

a) 16×15
 half double
 8×30
 240

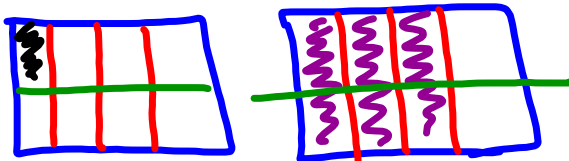
$$\begin{array}{r} 3 \\ 16 \\ \times 15 \\ \hline 80 \\ 160 \\ \hline 240 \end{array}$$

b) $\$5.99 - \2.49

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

Add the following: Using fraction blocks

a) $\frac{1}{8} + \frac{3}{4}$
 $\frac{1}{8} + \frac{6}{8}$



$$\frac{1}{8} + \frac{6}{8} = \frac{7}{8}$$

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

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

$$\frac{12}{15} \begin{array}{l} \div 3 \\ \div 3 \end{array} = \frac{4}{5}$$

$$\frac{24}{36} \begin{array}{l} \div 2 \\ \div 2 \end{array} = \frac{12}{18} \begin{array}{l} \div 2 \\ \div 2 \end{array} = \frac{6}{9} \begin{array}{l} \div 3 \\ \div 3 \end{array} = \frac{2}{3}$$

$$\frac{12}{9} \begin{array}{l} \div 3 \\ \div 3 \end{array} = \frac{4}{3} = 1 \frac{1}{3}$$

$$16 \times 15$$

	10	6	
10	10x10 100	10x6 60	100 60 50 + 30 <hr/> 240
5	5x10 50	5x6 30	

Homework Solutions

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

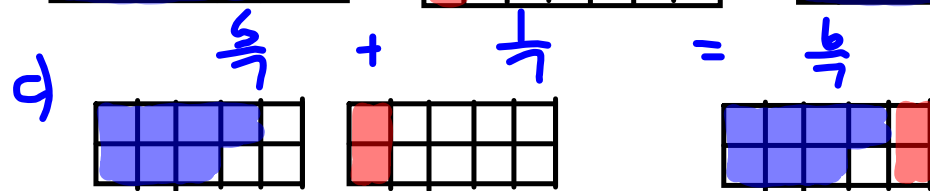
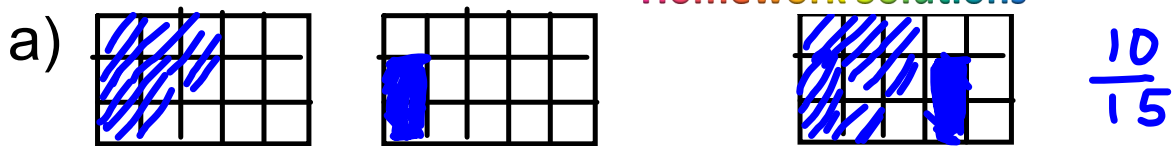
(j) $\frac{5}{9} + \frac{1}{3}$

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

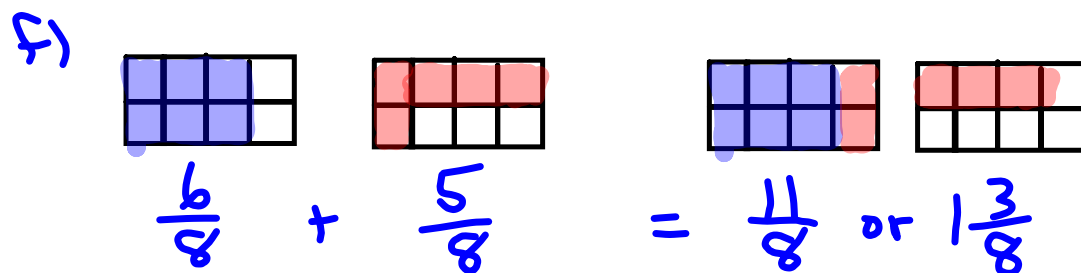
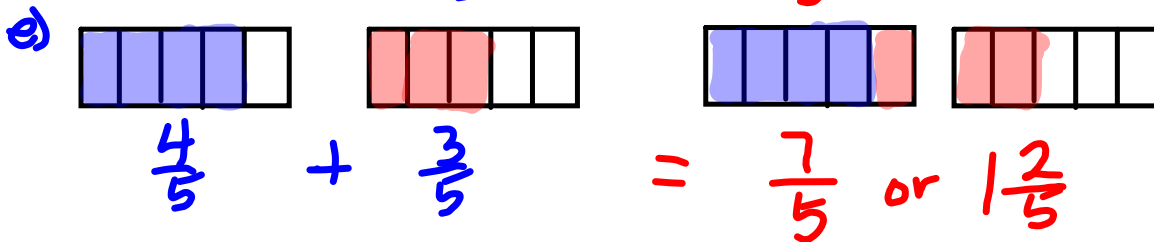
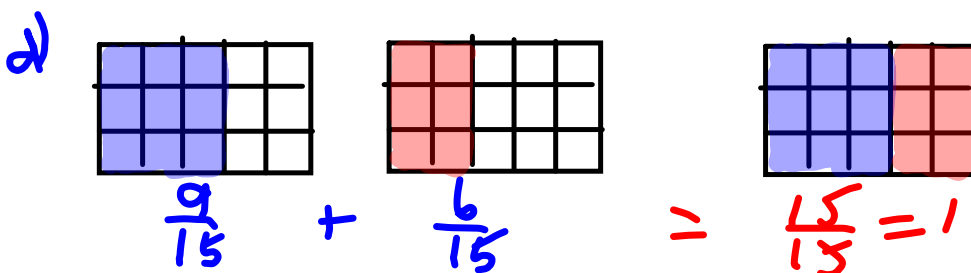
(l) $\frac{3}{10} + \frac{2}{5}$

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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

$$\frac{2}{6} + \frac{4}{6} = \frac{10}{6}$$

31

$$\frac{4}{12} + \frac{6}{12} = \frac{10}{12}$$

32

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

33

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

34

$$\frac{3}{10} + \frac{2}{5} = \frac{7}{10}$$

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

$$9 \times \frac{3}{5} + \frac{2}{9} \times 5$$

$$9 \times \frac{3}{5} + \frac{2}{9} \times 5$$

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

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

LCM is 45

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

Your Turn

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

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

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

6 → 6, 12, 18, 24, 30, 36, ...

15 → 15, 30

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

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

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

$$5 \times \frac{1}{2} + \frac{3}{10}$$

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

$$= \frac{8}{10} \quad \begin{array}{l} \div 2 \\ \div 2 \end{array}$$

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

$$\frac{1}{3} + \frac{1}{7}$$

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

$$\frac{10}{21}$$

$$\frac{5}{6} + \frac{3}{8}$$

$$\frac{20}{24} + \frac{9}{24}$$

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

$$= 1 \frac{5}{24}$$

Class/Homework

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#2(a,d),

#3(no number lines just add),

#4(don't estimate just add),

#5,

#6,

#7

2a) $\frac{3}{12} = \frac{\square}{4}$

39c
49ce

2d) $\frac{6}{8} = \frac{15}{\square}$



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

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