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Unit 2 Review

For each type of question, the achievement level is indicated. Showing work is an important strategy in communicating your knowledge and ideas so please be thorough.

Learning Goal 2.1	I can add and subtract fractions.

Developing								
1. Evaluate the following expressions. Leave answers in lowest terms.								
a.	$\frac{3}{5}+\frac{1}{5}=\frac{4}{5}$	b.	$\frac{6}{7}+\frac{3}{7}=\frac{9}{7}$	c.	$\frac{3}{5}-\frac{1}{5}=\frac{2}{5}$	d.	$\frac{6}{7}-\frac{3}{7}=\frac{3}{7}$
e.	$\frac{9}{11}+\frac{1}{11}=\frac{10}{11}$	f.	$\frac{5}{9}+\frac{4}{9}=1$	g.	$\frac{9}{11}-\frac{1}{11}=\frac{8}{11}$	h.	$\frac{5}{9}-\frac{4}{9}=\frac{1}{9}$
i.	$\frac{7}{4}+\frac{5}{4}=3$	j.	$\frac{8}{7}+\frac{36}{7}=\frac{44}{7}$	k.	$\frac{5}{4}-\frac{5}{4}=0$	l.	$\frac{37}{7}-\frac{8}{7}=\frac{29}{7}$
Proficient								
a.	$\frac{3}{4}+\frac{7}{8}=\frac{13}{8}$	b.	$\frac{3}{4}+\frac{1}{20}=\frac{4}{5}$	c.	$\frac{13}{3}-\frac{13}{4}=\frac{13}{12}$	d.	$\frac{2}{5}-\frac{1}{10}=\frac{3}{10}$
e.	$\frac{21}{10}+\frac{18}{5}=\frac{57}{10}$	f.	$\left(-\frac{3}{5}\right)+\frac{4}{3}=\frac{11}{15}$	g.	$\frac{4}{3}-\frac{11}{6}=-\frac{1}{2}$	h.	$\frac{1}{19}-\frac{1}{2}=-\frac{17}{38}$
i.	$\frac{11}{9}+\left(-\frac{17}{6}\right)=-\frac{29}{18}$	j.	$\left(-\frac{3}{10}\right)+\left(-\frac{9}{5}\right)=-\frac{21}{10}$	k.	$\frac{9}{10}-\frac{11}{18}=\frac{13}{45}$	l.	$\frac{6}{7}-\frac{7}{9}=\frac{5}{63}$
Extending								
a.	$\left(-1\frac{1}{2}\right)+3\frac{1}{3}=-\frac{29}{6}$	b.	$1\frac{5}{6}+\left(-5\frac{2}{3}\right)=-\frac{23}{6}$	c.	$1\frac{3}{5}-2\frac{1}{2}=-\frac{9}{10}$	d.	$3\frac{5}{7}-\left(-6\frac{2}{3}\right)=\frac{218}{21}$
e.	$\left(-3\frac{1}{3}\right)+2\frac{5}{6}=-\frac{1}{2}$	f.	$\left(-3\frac{1}{4}\right)+\left(-2\frac{1}{6}\right)=-\frac{65}{12}$	g.	$11\frac{1}{3}-6\frac{11}{12}=\frac{53}{12}$	h.	$8\frac{2}{5}-3\frac{37}{40}=\frac{179}{40}$
i.	$\left(-4\frac{5}{6}\right)+\left(-1\frac{5}{12}\right)=-\frac{25}{4}$	j.	$\frac{7}{4}+\left(-\frac{6}{5}\right)=\frac{11}{20}$	k.	$\left(-2\frac{1}{8}\right)-\left(-4\frac{1}{3}\right)=\frac{53}{24}$	l.	$5\frac{1}{6}-6\frac{3}{10}=-\frac{17}{15}$

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Extending
2. A book has eight chapters of equal length. Mary has read four chapters. What fraction of the book does Mary have left to read? $^1/_2$ of the book
3. Jack needs to walk $^7/_{10}$ of a kilometre to school. He has already walked $^1/_5$ of a kilometre. How much farther does Jack need to walk? $^1/_2$ km
4. Dad cut an apple pie into eight slices. He served four slices to his children and two slices to his wife. What fraction of the pie did he leave for himself? $^1/_4$ of the pie

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Learning Goal 2.2	I can multiply and divide fractions.

Developing						
1. Evaluate the following expressions.						
a.	$\frac{1}{2} \times \frac{1}{3} = \frac{1}{6}$	b.	$\frac{1}{6} \times \frac{5}{7} = \frac{5}{42}$	c.	$\frac{3}{4} \div \frac{1}{3} = \frac{9}{4}$	d.	$\frac{1}{3} \div \frac{1}{5} = \frac{5}{3}$
e.	$\frac{2}{3} \times \frac{4}{5} = \frac{5}{6}$	f.	$\frac{3}{4} \times \frac{3}{4} = \frac{9}{16}$	g.	$\frac{1}{5} \div \frac{1}{3} = \frac{3}{5}$	h.	$\frac{2}{7} \div \frac{3}{4} = \frac{8}{21}$
i.	$\frac{2}{9} \times \frac{1}{4} = \frac{1}{18}$	j.	$\frac{6}{7} \times \frac{3}{5} = \frac{18}{35}$	k.	$\frac{2}{3} \div \frac{3}{5} = \frac{10}{9}$	l.	$\frac{4}{5} \div \frac{7}{8} = \frac{32}{35}$
m.	$\frac{3}{5} \times \frac{1}{2} = \frac{3}{10}$	n.	$\frac{3}{4} \times \frac{3}{7} = \frac{9}{28}$	o.	$\frac{2}{5} \div \frac{5}{7} = \frac{14}{25}$	p.	$\frac{3}{7} \div \frac{1}{4} = \frac{12}{7}$
Proficient						
a.	$\frac{11}{9} \times \left(-\frac{5}{6}\right) = -\frac{55}{54}$	b.	$\left(-\frac{3}{10}\right) \times \left(-\frac{9}{5}\right) = \frac{27}{50}$	c.	$\left(-1\frac{5}{6}\right) \div \left(-1\frac{5}{7}\right) = \frac{77}{72}$	d.	$\left(-\frac{3}{5}\right) \div \frac{4}{3} = -\frac{9}{20}$
e.	$\left(-3\frac{1}{4}\right) \times \left(-2\frac{1}{6}\right) = \frac{169}{24}$	f.	$\frac{12}{15} \times \left(-\frac{25}{18}\right) = -\frac{10}{9}$	g.	$\frac{7}{4} \div \left(-\frac{6}{5}\right) = -\frac{35}{24}$	h.	$\frac{9}{20} \div \frac{12}{10} = \frac{3}{8}$
i.	$3\frac{5}{7} \times \left(-\frac{2}{3}\right) = -\frac{52}{21}$	j.	$\left(-2\frac{1}{8}\right) \times \left(-4\frac{1}{3}\right) = \frac{221}{24}$	k.	$1\frac{3}{5} \div 2\frac{1}{2} = \frac{16}{25}$	l.	$\left(-3\frac{3}{5}\right) \div 2\frac{1}{2} = -\frac{36}{25}$
m.	$\frac{9}{20} \times \frac{16}{15} = \frac{12}{25}$	n.	$1\frac{4}{14} \times 3\frac{1}{2} = \frac{9}{2}$	o.	$2\frac{4}{7} \div \left(-5\frac{1}{3}\right) = -\frac{27}{56}$	p.	$\left(-\frac{3}{14}\right) \div \left(-\frac{12}{21}\right) = \frac{3}{8}$
Extending						
2. Model, then evaluate the following expressions.						
a.	$\frac{4}{7} \times \frac{4}{7}$	b.	$\frac{3}{4} \times \frac{4}{7}$	c.	$\frac{3}{5} \div \frac{1}{3}$	d.	$\frac{3}{4} \div \frac{2}{3}$
e.	$\frac{4}{3} \times \frac{5}{6}$	f.	$\frac{1}{2} \times \frac{2}{3}$	g.	$\frac{5}{6} \div \frac{2}{3}$	h.	$\frac{2}{5} \div \frac{2}{7}$

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Extending
3. Write 3 multiplication statements that have the same product as $$\left(-\frac{4}{9}\right)\left(\frac{7}{5}\right)$$ Check your answers.

4. A snapshot is taken at a parking lot and analyzed. It shows 24 cars, 26 bicycles and 12 motorcycles.
    a. What fraction (in lowest terms) of the contents of the parking lot are cars? $^{12}/_{31}$
    b. What fraction (in lowest terms) of the contents of the parking lot are bicycles? $^{13}/_{31}$
    c. What fraction (in lowest terms) of the contents of the parking lot are motorcycles? $^{6}/_{31}$

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Learning Goal 2.3	I can apply order of operations to fractions.

Extending		
1. Evaluate the following expressions on **fractions.**		
a. $\left(\frac{2}{3}+\frac{7}{5}+\frac{11}{6}\right)\times 2\frac{1}{4}=\frac{351}{40}$	b. $\frac{1}{2}\div\left(\frac{10}{7}\times 2\frac{5}{6}\right)\times 1\frac{3}{8}=\frac{231}{1360}$	c. $\left(7\times\frac{10}{7}\right)\div\frac{6}{5}+1\frac{3}{4}=\frac{121}{12}$
d. $\left(\frac{3}{2}\times 3\frac{1}{2}\right)\div\left(\frac{6}{5}-1\right)=\frac{105}{4}$	e. $6\left(\frac{4}{3}\left(1+\frac{1}{7}\right)\right)\div\frac{13}{10}=\frac{120}{13}$	f. $\left(\frac{3}{4}\times 1\frac{4}{9}\right)\div\left(4\frac{1}{6}+1\frac{3}{4}\right)=\frac{13}{71}$
g. $\left(3\frac{7}{10}-\frac{11}{7}\right)\times\frac{8}{5}-1\frac{1}{7}=\frac{836}{175}$	h. $\left(1-\frac{3}{4}\right)\times\frac{3}{7}\div 2=\frac{3}{56}$	i. $\left(4\frac{9}{10}-1\right)^{2}\div 2\frac{1}{6}=\frac{351}{50}$
j. $1\frac{2}{3}\times\left(1+\frac{1}{4}\right)\div\frac{1}{4}=\frac{25}{3}$	k. $\left(\frac{4}{3}-\frac{1}{2}\right)\div\frac{5}{3}\times 1\frac{3}{4}=\frac{7}{8}$	l. $\left(-\frac{7}{8}\right)\times\left(\frac{4}{5}-\left(\frac{2}{3}\right)^{2}\right)=-\frac{14}{45}$

Extending
2. What is the mean of the following numbers?
$$3, 5, 7, 1, 6 \text{ and } 2$$
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