

RIDDLE: What Happens To A Dog Who Eats Table Scraps?

Make the one-color trains for (orange & brown). Solve the following addition and subtraction problems by using the family name (common denominator). Express all final answers in lowest terms. Match each answer with the given letter to solve the riddle.

Add

$$\begin{array}{r} 1) \frac{1}{2} = \text{Hexagon} \\ + \frac{5}{18} = \text{Hexagon} \\ \hline \text{Hexagon or Hexagon} \end{array} \quad \text{G}$$

$$\begin{array}{r} 2) \frac{1}{2} = \text{Hexagon} \\ + \frac{4}{9} = \text{Hexagon} \\ \hline \text{Hexagon} \end{array} \quad \text{P}$$

$$\begin{array}{r} 3) \frac{5}{6} = \text{Hexagon} \\ + \frac{1}{18} = \text{Hexagon} \\ \hline \text{Hexagon or Hexagon} \end{array} \quad \text{T}$$

$$\begin{array}{r} 4) \frac{4}{9} = \text{Hexagon} \\ + \frac{1}{6} = \text{Hexagon} \\ \hline \text{Hexagon} \end{array} \quad \text{N}$$

$$\begin{array}{r} 5) \frac{2}{9} = \text{Hexagon} \\ + \frac{5}{18} = \text{Hexagon} \\ \hline \text{Hexagon or Hexagon} \end{array} \quad \text{E}$$

$$\begin{array}{r} 6) \frac{1}{6} = \text{Hexagon} \\ + \frac{7}{18} = \text{Hexagon} \\ \hline \text{Hexagon or Hexagon} \end{array} \quad \text{R}$$

Subtract

$$\begin{array}{r} 7) \frac{8}{9} = \text{Hexagon} \\ - \frac{1}{2} = \text{Hexagon} \\ \hline \text{Hexagon} \end{array} \quad \text{H}$$

$$\begin{array}{r} 8) \frac{5}{6} = \text{Hexagon} \\ - \frac{2}{3} = \text{Hexagon} \\ \hline \text{Hexagon or Hexagon} \end{array} \quad \text{I}$$

$$\begin{array}{r} 9) \frac{1}{2} = \text{Hexagon} \\ - \frac{4}{9} = \text{Hexagon} \\ \hline \text{Hexagon} \end{array} \quad \text{S}$$

$$\begin{array}{r} 10) \frac{2}{3} = \text{Hexagon} \\ - \frac{7}{18} = \text{Hexagon} \\ \hline \text{Hexagon} \end{array} \quad \text{U}$$

$$\begin{array}{r} 11) \frac{5}{6} = \text{Hexagon} \\ - \frac{1}{9} = \text{Hexagon} \\ \hline \text{Hexagon} \end{array} \quad \text{L}$$

$$\begin{array}{r} 12) \frac{11}{18} = \text{Hexagon} \\ - \frac{1}{2} = \text{Hexagon} \\ \hline \text{Hexagon or Hexagon} \end{array} \quad \text{O}$$

Riddle Answer

$\frac{7}{18}$	$\frac{1}{2}$

$\frac{7}{9}$	$\frac{1}{2}$	$\frac{8}{9}$	$\frac{1}{18}$

$\frac{1}{18}$	$\frac{17}{18}$	$\frac{13}{18}$	$\frac{1}{6}$	$\frac{11}{18}$	$\frac{8}{9}$	$\frac{1}{2}$	$\frac{5}{9}$	$\frac{1}{18}$	

$\frac{1}{6}$	$\frac{11}{18}$

$\frac{7}{18}$	$\frac{1}{6}$	$\frac{1}{18}$

$\frac{8}{9}$	$\frac{1}{9}$	$\frac{11}{18}$	$\frac{7}{9}$	$\frac{5}{18}$	$\frac{1}{2}$

RIDDLE: What Has A Foot At Each End And A Foot In The Middle?

w	w	w	w	w	w	w	w	w	w	w	w
orange										red	
dark green					dark green						
purple			purple				purple				
green		green			green			green			
red	red	red	red	red	red	red	red	red	red	red	

Cover the diagram to show fractional parts of (orange & red). Solve the following addition and subtraction problems by using the family name (common denominator). Express all final answers in lowest terms. Match each answer with the given letter to solve the riddle.

$$\begin{array}{r} 1) \frac{5}{12} = \text{Hexagon} \\ + \frac{1}{4} = \text{Hexagon} \\ \hline \text{Hexagon} \text{ or } \text{Hexagon} \end{array} \quad \text{D}$$

$$\begin{array}{r} 2) \frac{1}{4} = \text{Hexagon} \\ - \frac{1}{6} = \text{Hexagon} \\ \hline \text{Hexagon} \end{array} \quad \text{I}$$

$$\begin{array}{r} 3) \frac{1}{4} = \text{Hexagon} \\ + \frac{1}{6} = \text{Hexagon} \\ \hline \text{Hexagon} \end{array} \quad \text{T}$$

$$\begin{array}{r} 4) \frac{5}{6} = \text{Hexagon} \\ - \frac{1}{4} = \text{Hexagon} \\ \hline \text{Hexagon} \end{array} \quad \text{C}$$

$$\begin{array}{r} 5) \frac{2}{3} = \text{Hexagon} \\ + \frac{1}{4} = \text{Hexagon} \\ \hline \text{Hexagon} \end{array} \quad \text{Y}$$

$$\begin{array}{r} 6) \frac{5}{12} = \text{Hexagon} \\ - \frac{1}{4} = \text{Hexagon} \\ \hline \text{Hexagon} \text{ or } \text{Hexagon} \end{array} \quad \text{K}$$

$$\begin{array}{r} 7) \frac{1}{12} = \text{Hexagon} \\ + \frac{1}{6} = \text{Hexagon} \\ \hline \text{Hexagon} \text{ or } \text{Hexagon} \end{array} \quad \text{S}$$

$$\begin{array}{r} 8) \frac{5}{6} = \text{Hexagon} \\ - \frac{1}{2} = \text{Hexagon} \\ \hline \text{Hexagon} \text{ or } \text{Hexagon} \end{array} \quad \text{R}$$

$$\begin{array}{r} 9) \frac{2}{3} = \text{Hexagon} \\ + \frac{1}{12} = \text{Hexagon} \\ \hline \text{Hexagon} \text{ or } \text{Hexagon} \end{array} \quad \text{A}$$

Riddle
Answer

$\frac{3}{4}$

$\frac{11}{12}$	$\frac{3}{4}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{4}$	$\frac{5}{12}$	$\frac{1}{12}$	$\frac{7}{12}$	$\frac{1}{6}$	

RIDDLE: What's The Difference Between An Angry Rabbit And A Counterfeit \$10 Bill?

Make all the one-color trains for (orange & brown). Use these trains to help solve the following problems. Match the letter given with each answer to solve the riddle. All answers have been expressed using the family name, eighteenths.

$$1) \frac{1}{2} - \frac{1}{9} = \text{Hexagon} \text{ Y}$$

$$8) \frac{5}{6} - \frac{1}{9} = \text{Hexagon} \text{ S}$$

$$2) \frac{1}{2} - \frac{1}{18} = \text{Hexagon} \text{ A}$$

$$9) \frac{5}{6} - \frac{1}{18} = \text{Hexagon} \text{ I}$$

$$3) \frac{1}{3} - \frac{1}{9} = \text{Hexagon} \text{ T}$$

$$10) \frac{8}{9} - \frac{1}{18} = \text{Hexagon} \text{ U}$$

$$4) \frac{1}{3} - \frac{1}{18} = \text{Hexagon} \text{ O}$$

$$11) \frac{7}{9} - \frac{2}{3} = \text{Hexagon} \text{ H}$$

$$5) \frac{1}{6} - \frac{1}{9} = \text{Hexagon} \text{ N}$$

$$12) \frac{4}{9} - \frac{5}{18} = \text{Hexagon} \text{ E}$$

$$6) \frac{2}{3} - \frac{1}{9} = \text{Hexagon} \text{ M}$$

$$13) \frac{1}{2} - \frac{1}{6} = \text{Hexagon} \text{ R}$$

$$7) \frac{2}{3} - \frac{1}{18} = \text{Hexagon} \text{ B}$$

$$14) 1 - \frac{1}{18} = \text{Hexagon} \text{ D}$$

Riddle Answer

$\frac{5}{18}$	$\frac{1}{18}$	$\frac{3}{18}$

$\frac{14}{18}$	$\frac{13}{18}$

$\frac{8}{18}$

$\frac{10}{18}$	$\frac{8}{18}$	$\frac{17}{18}$

$\frac{11}{18}$	$\frac{15}{18}$	$\frac{1}{18}$	$\frac{1}{18}$	$\frac{7}{18}$

$\frac{8}{18}$	$\frac{1}{18}$	$\frac{17}{18}$

$\frac{4}{18}$	$\frac{2}{18}$	$\frac{3}{18}$

$\frac{5}{18}$	$\frac{4}{18}$	$\frac{2}{18}$	$\frac{3}{18}$	$\frac{6}{18}$

$\frac{14}{18}$	$\frac{13}{18}$

$\frac{11}{18}$	$\frac{8}{18}$	$\frac{17}{18}$

$\frac{10}{18}$	$\frac{5}{18}$	$\frac{1}{18}$	$\frac{3}{18}$	$\frac{7}{18}$

RIDDLE: What Has One Horn, Runs Up And Down The Street, And Gives Milk?

w	w	w	w	w	w	w	w	w	w	w	w	w	w	w
orange										yellow				
yellow					yellow					yellow				
green			green			green			green			green		

Cover the diagram to show the fractional parts of (orange & yellow). Solve the following addition problems by finding a common denominator. Put answers in lowest terms. Check all problems with rods. Match each answer with the letter to solve the riddle.

$$\begin{array}{r}
 1) \frac{1}{3} = \text{rod} \\
 + \frac{1}{5} = \text{rod} \\
 \hline
 \text{rod}
 \end{array}
 \text{R}$$

$$\begin{array}{r}
 2) \frac{1}{3} = \text{rod} \\
 + \frac{2}{5} = \text{rod} \\
 \hline
 \text{rod}
 \end{array}
 \text{K}$$

$$\begin{array}{r}
 3) \frac{2}{3} = \text{rod} \\
 + \frac{1}{5} = \text{rod} \\
 \hline
 \text{rod}
 \end{array}
 \text{A}$$

$$\begin{array}{r}
 4) \frac{3}{5} = \text{rod} \\
 + \frac{1}{3} = \text{rod} \\
 \hline
 \text{rod}
 \end{array}
 \text{I}$$

$$\begin{array}{r}
 5) \frac{1}{3} = \text{rod} \\
 + \frac{1}{15} = \text{rod} \\
 \hline
 \text{rod or rod}
 \end{array}
 \text{L}$$

$$\begin{array}{r}
 6) \frac{1}{5} = \text{rod} \\
 + \frac{7}{15} = \text{rod} \\
 \hline
 \text{rod or rod}
 \end{array}
 \text{C}$$

$$\begin{array}{r}
 7) \frac{4}{15} = \text{rod} \\
 + \frac{1}{3} = \text{rod} \\
 \hline
 \text{rod or rod}
 \end{array}
 \text{T}$$

$$\begin{array}{r}
 8) \frac{2}{5} = \text{rod} \\
 + \frac{1}{15} = \text{rod} \\
 \hline
 \text{rod}
 \end{array}
 \text{U}$$

$$\begin{array}{r}
 9) \frac{2}{3} = \text{rod} \\
 + \frac{2}{15} = \text{rod} \\
 \hline
 \text{rod or rod}
 \end{array}
 \text{M}$$

Riddle
Answer

$\frac{13}{15}$

$\frac{4}{5}$	$\frac{14}{15}$	$\frac{2}{5}$	$\frac{11}{15}$

$\frac{3}{5}$	$\frac{8}{15}$	$\frac{7}{15}$	$\frac{2}{3}$	$\frac{11}{15}$

RIDDLE: What's The Difference Between A Man Going Up The Stairs And A Man Looking Up The Stairs?

Make all the one-color trains for (orange & brown). Use these trains to help solve the following problems. Match the letter given with each answer to solve the riddle. All answers have been expressed using the family name, eighteenths.

$$1) \frac{1}{2} + \frac{1}{3} = \text{Hexagon} \text{ N}$$

$$7) \frac{1}{2} + \frac{1}{6} = \text{Hexagon} \text{ R}$$

$$2) \frac{1}{2} + \frac{1}{9} = \text{Hexagon} \text{ P}$$

$$8) \frac{1}{2} + \frac{1}{18} = \text{Hexagon} \text{ U}$$

$$3) \frac{1}{9} + \frac{1}{6} = \text{Hexagon} \text{ E}$$

$$9) \frac{1}{3} + \frac{1}{9} = \text{Hexagon} \text{ I}$$

$$4) \frac{1}{3} + \frac{1}{18} = \text{Hexagon} \text{ A}$$

$$10) \frac{1}{6} + \frac{1}{3} = \text{Hexagon} \text{ O}$$

$$5) \frac{1}{6} + \frac{1}{18} = \text{Hexagon} \text{ S}$$

$$11) \frac{1}{9} + \frac{1}{18} = \text{Hexagon} \text{ T}$$

$$6) \frac{5}{6} + \frac{1}{9} = \text{Hexagon} \text{ H}$$

$$12) \frac{1}{2} + \frac{2}{9} = \text{Hexagon} \text{ D}$$

Riddle Answer

$\frac{9}{18}$	$\frac{15}{18}$	$\frac{5}{18}$

$\frac{4}{18}$	$\frac{3}{18}$	$\frac{5}{18}$	$\frac{11}{18}$	$\frac{4}{18}$

$\frac{10}{18}$	$\frac{11}{18}$

$\frac{3}{18}$	$\frac{17}{18}$	$\frac{5}{18}$

$\frac{4}{18}$	$\frac{3}{18}$	$\frac{7}{18}$	$\frac{8}{18}$	$\frac{12}{18}$	$\frac{4}{18}$

$\frac{7}{18}$	$\frac{15}{18}$	$\frac{13}{18}$

$\frac{3}{18}$	$\frac{17}{18}$	$\frac{5}{18}$

$\frac{9}{18}$	$\frac{3}{18}$	$\frac{17}{18}$	$\frac{5}{18}$	$\frac{12}{18}$

$\frac{4}{18}$	$\frac{3}{18}$	$\frac{7}{18}$	$\frac{12}{18}$	$\frac{5}{18}$	$\frac{4}{18}$

$\frac{10}{18}$	$\frac{11}{18}$

$\frac{3}{18}$	$\frac{17}{18}$	$\frac{5}{18}$

$\frac{4}{18}$	$\frac{3}{18}$	$\frac{5}{18}$	$\frac{11}{18}$	$\frac{4}{18}$

RIDDLE I: What Coat Is Put On Only When Its Wet?

Make all the one-color trains for (orange & yellow). Use these trains to help solve the following problems. Match the letter given with each answer to solve the riddle. All answers have been expressed using the family name, fifteenths.

$$1) \frac{1}{3} + \frac{1}{5} = \text{Hexagon} \text{ T}$$

$$5) \frac{1}{3} + \frac{1}{15} = \text{Hexagon} \text{ N}$$

$$2) \frac{1}{5} + \frac{1}{15} = \text{Hexagon} \text{ I}$$

$$6) \frac{2}{3} + \frac{1}{5} = \text{Hexagon} \text{ A}$$

$$3) \frac{2}{3} + \frac{1}{15} = \text{Hexagon} \text{ C}$$

$$7) \frac{2}{5} + \frac{1}{15} = \text{Hexagon} \text{ O}$$

$$4) \frac{3}{5} + \frac{1}{3} = \text{Hexagon} \text{ F}$$

$$8) \frac{4}{15} + \frac{2}{5} = \text{Hexagon} \text{ P}$$

Riddle Answer

$\frac{13}{15}$	$\frac{11}{15}$	$\frac{7}{15}$	$\frac{13}{15}$	$\frac{8}{15}$	$\frac{7}{15}$	$\frac{14}{15}$	$\frac{10}{15}$	$\frac{13}{15}$
							$\frac{4}{15}$	$\frac{6}{15}$
							$\frac{8}{15}$	

RIDDLE II: What Do You Say When You Call Your Dog And He Doesn't Come?

Make all the one-color trains for (orange & purple). Use these trains to help solve the following problems. Match the letter given with each answer to solve the riddle. All answers have been expressed using the family name, fourteenths.

$$1) \frac{1}{2} + \frac{1}{7} = \text{Hexagon} \text{ N}$$

$$4) \frac{1}{2} + \frac{1}{14} = \text{Hexagon} \text{ G}$$

$$2) \frac{1}{7} + \frac{1}{14} = \text{Hexagon} \text{ E}$$

$$5) \frac{2}{7} + \frac{1}{14} = \text{Hexagon} \text{ D}$$

$$3) \frac{1}{2} + \frac{2}{7} = \text{Hexagon} \text{ O}$$

$$6) \frac{1}{2} + \frac{3}{7} = \text{Hexagon} \text{ !}$$

Riddle Answer

$\frac{5}{14}$	$\frac{11}{14}$	$\frac{8}{14}$	$\frac{8}{14}$	$\frac{11}{14}$	$\frac{9}{14}$	$\frac{3}{14}$	$\frac{13}{14}$

RIDDLE: What Happens To Two Frogs Who Try To Catch The Same Bug At The Same Time?

Make all the one-color trains for (orange & dark green). Use these trains to help solve the following problems. Match the letter given with each answer to solve the riddle. All answers have been expressed using the family name, sixteenths.

$$1) \frac{1}{2} + \frac{1}{8} = \text{Hexagon} \text{ U}$$

$$7) \frac{1}{2} + \frac{1}{4} = \text{Hexagon} \text{ P}$$

$$2) \frac{1}{2} + \frac{1}{16} = \text{Hexagon} \text{ E}$$

$$8) \frac{1}{4} + \frac{1}{8} = \text{Hexagon} \text{ T}$$

$$3) \frac{1}{4} + \frac{1}{16} = \text{Hexagon} \text{ U}$$

$$9) \frac{1}{8} + \frac{1}{16} = \text{Hexagon} \text{ N}$$

$$4) \frac{1}{2} + \frac{3}{8} = \text{Hexagon} \text{ O}$$

$$10) \frac{1}{2} + \frac{3}{16} = \text{Hexagon} \text{ H}$$

$$5) \frac{1}{2} + \frac{5}{16} = \text{Hexagon} \text{ Y}$$

$$11) \frac{5}{8} + \frac{5}{16} = \text{Hexagon} \text{ G}$$

$$6) \frac{1}{4} + \frac{3}{16} = \text{Hexagon} \text{ D}$$

$$12) \frac{1}{16} + \frac{7}{16} = \text{Hexagon} \text{ I}$$

Riddle
Answer

$\frac{6}{16}$	$\frac{11}{16}$	$\frac{9}{16}$	$\frac{13}{16}$

$\frac{9}{16}$	$\frac{3}{16}$	$\frac{7}{16}$

$\frac{5}{16}$	$\frac{12}{16}$

$\frac{6}{16}$	$\frac{14}{16}$	$\frac{3}{16}$	$\frac{15}{16}$	$\frac{10}{16}$	$\frac{9}{16}$

$\frac{6}{16}$	$\frac{8}{16}$	$\frac{9}{16}$	$\frac{7}{16}$