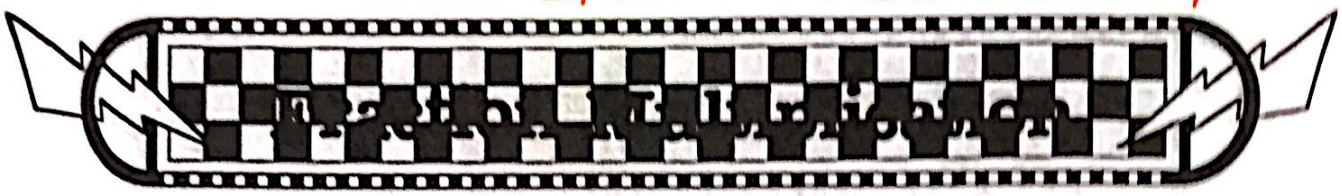
2/7/18 Wed HW KEY



mixed & whole numbers

Reduce to Lowest Terms when necessary.

$\frac{3}{5} \times 5 = 3$ $\quad 6 \times \frac{7}{8} = \frac{21}{4}$ or $5\frac{1}{4}$ $\quad \frac{3}{5} \times \frac{4}{15} = \frac{4}{25}$ $\quad \frac{3}{7} \times 28 = 12$

$\frac{14}{15} \times \frac{5}{7} = \frac{2}{3}$ $\quad \frac{4}{9} \times 63 = 28$ $\quad 24 \times \frac{11}{12} = 22$ $\quad \frac{7}{8} \times 96 = 84$

$1\frac{1}{2} \times 5 = \frac{15}{2}$ or $7\frac{1}{2}$ $\quad 3\frac{2}{7} \times 4 = \frac{92}{7}$ or $13\frac{1}{7}$ $\quad 10 \times 5\frac{3}{4} = \frac{115}{2}$ or $57\frac{1}{2}$ $\quad 3\frac{3}{4} \times \frac{1}{2} = \frac{15}{8}$ or $1\frac{7}{8}$

$\frac{7}{8} \times 5\frac{11}{12} = \frac{497}{96}$ or $5\frac{17}{96}$ $\quad 15 \times \frac{5}{6} = \frac{25}{2}$ or $12\frac{1}{2}$ $\quad 1\frac{1}{3} \times 1\frac{1}{3} = \frac{16}{9}$ or $1\frac{7}{9}$ $\quad 2\frac{3}{4} \times \frac{5}{6} = \frac{55}{24}$ or $2\frac{7}{24}$

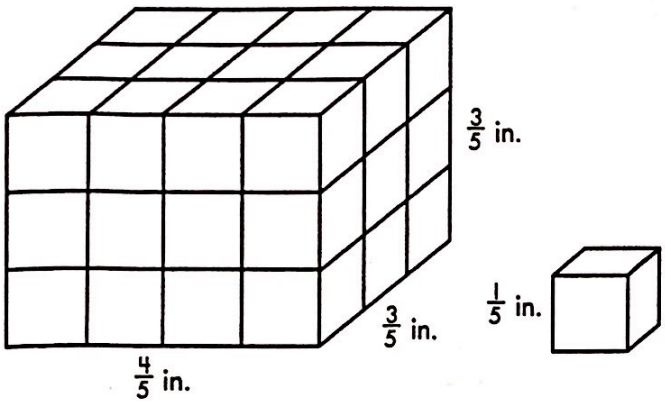
$3\frac{1}{5} \times 2\frac{2}{3} = \frac{128}{15}$ or $8\frac{8}{15}$ $\quad \frac{5}{8} \times 12 = \frac{15}{2}$ or $7\frac{1}{2}$ $\quad 3\frac{1}{2} \times \frac{4}{9} = \frac{14}{9}$ or $1\frac{5}{9}$ $\quad 1\frac{1}{2} \times 2\frac{3}{8} = \frac{57}{16}$ or $3\frac{9}{16}$

$6\frac{3}{8} \times 2\frac{2}{5} = \frac{153}{10}$ or $15\frac{3}{10}$ $\quad 3\frac{3}{5} \times 2\frac{5}{6} = \frac{51}{5}$ or $10\frac{1}{5}$ $\quad 4\frac{2}{3} \times 4\frac{3}{8} = \frac{245}{12}$ or $20\frac{5}{12}$ $\quad 2\frac{3}{10} \times 1\frac{1}{2} = \frac{69}{20}$ or $3\frac{9}{20}$

NAME _____

Lesson 6.4 Volume of Rectangular Solids

The volume of a rectangular solid with fractional edge lengths can also be measured by packing the solid with cubes that share a common denominator with the edge lengths. In this rectangular solid, each side length has a denominator of 5, so the solid can be packed with $\frac{1}{5}$ inch cubes to determine its volume.



First, calculate the volume of the cube itself.

$\frac{1}{5} \times \frac{1}{5} \times \frac{1}{5} = \frac{1}{125}$ cubic inches

Next, add up the cubes in the solid. You can see from the top layer that there are 12 cubes per layer, and $12 \times 3 = 36$.

Last, multiply the number of cubes times the volume of one cube.

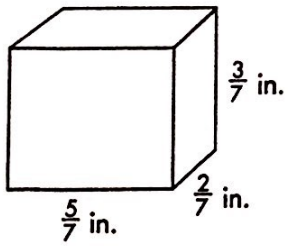
$36 \times \frac{1}{125} = \frac{36}{125}$ cubic inches

This is the same answer you get when you use the formula $l \times w \times h$. $\frac{4}{5} \times \frac{3}{5} \times \frac{3}{5} = \frac{36}{125}$

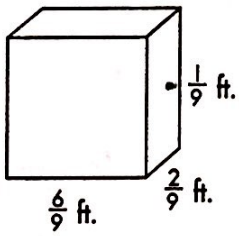
Find the volume of each rectangular solid.

a **b**

1.

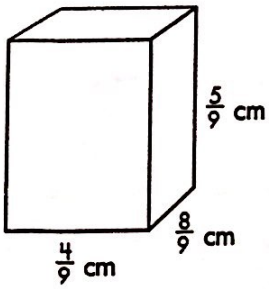


$V = \frac{30}{343}$ cu. in.

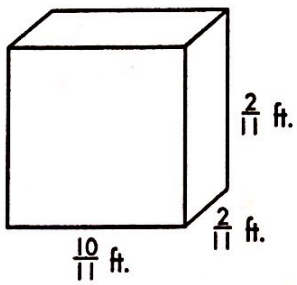


$V = \frac{12}{729}$ cu. ft.

2.



$V = \frac{160}{729}$ cu. cm



$V = \frac{40}{1331}$ cu. ft.