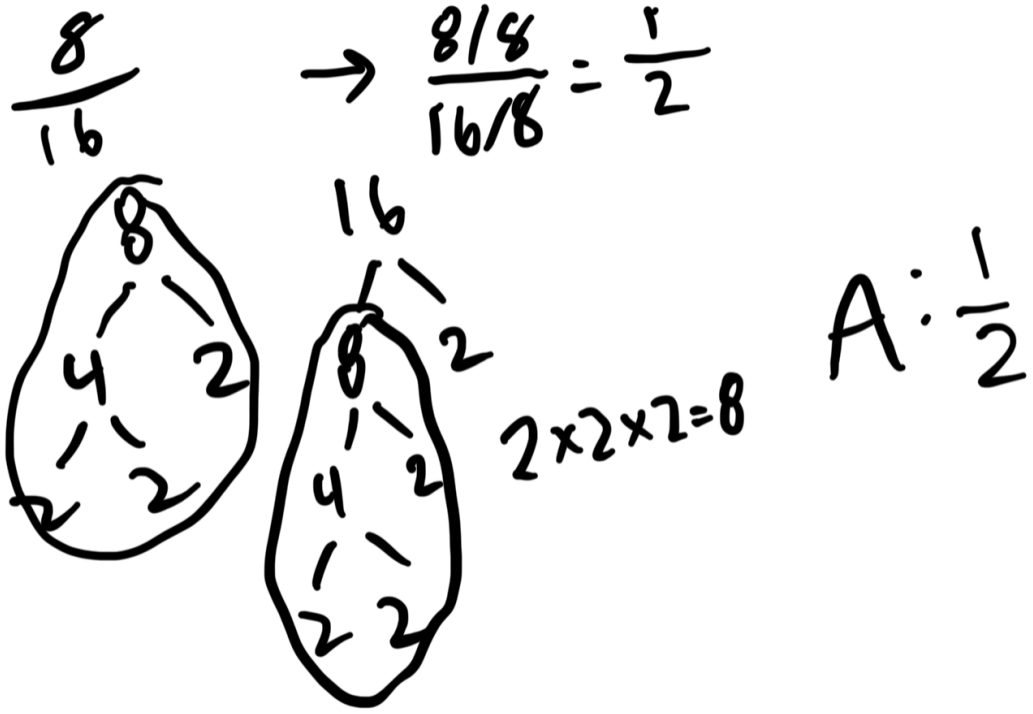
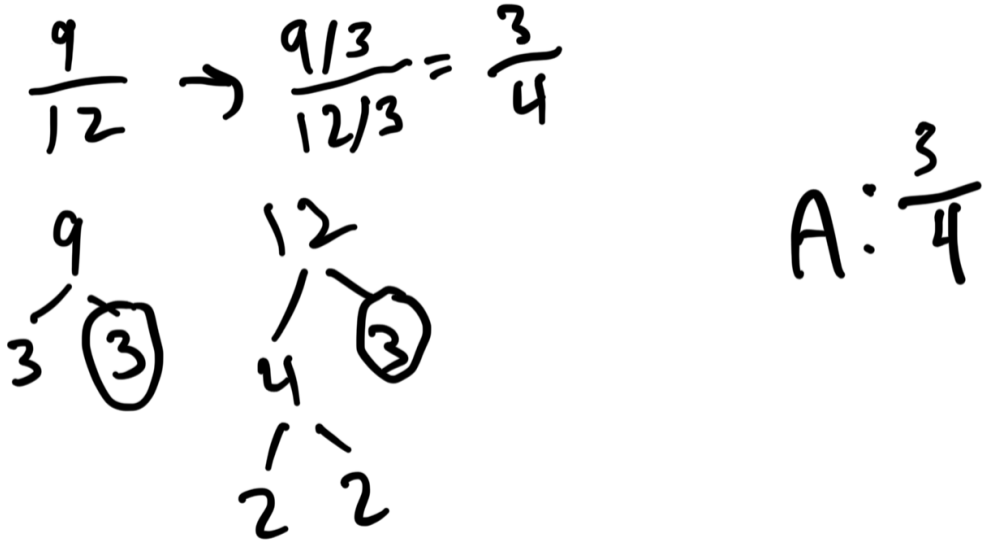
Basic Fraction Skills.

A. Lower the following fractions to their lowest terms. Make sure to show your work, including all intermediate steps!

1. 8/16

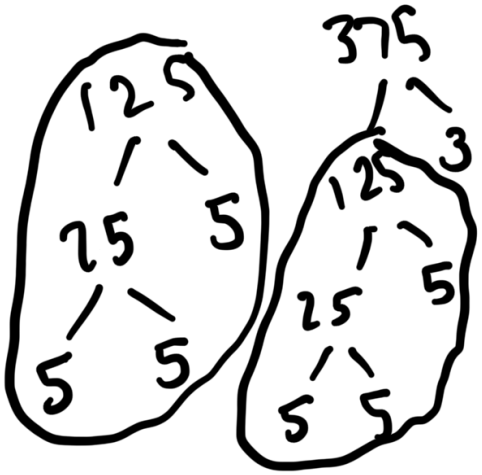


2. 9/12



3. 125/375

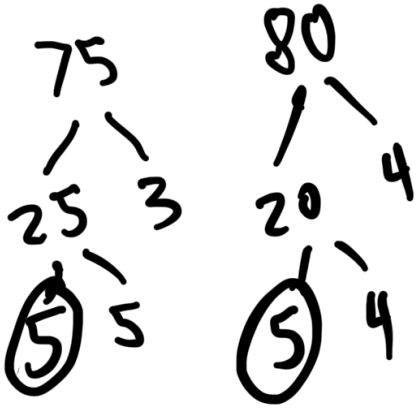
$\frac{125}{375} \rightarrow \frac{125/125}{375/125} = \frac{1}{3}$



A: $\frac{1}{3}$

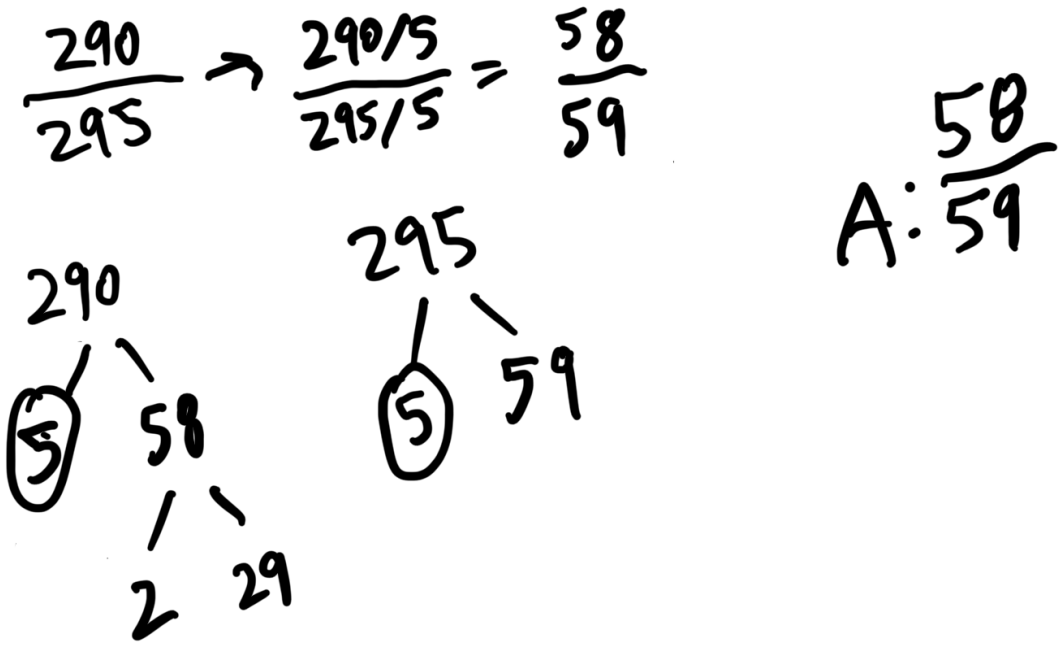
4. 75/80

$\frac{75}{80} \rightarrow \frac{75/5}{80/5} = \frac{15}{16}$



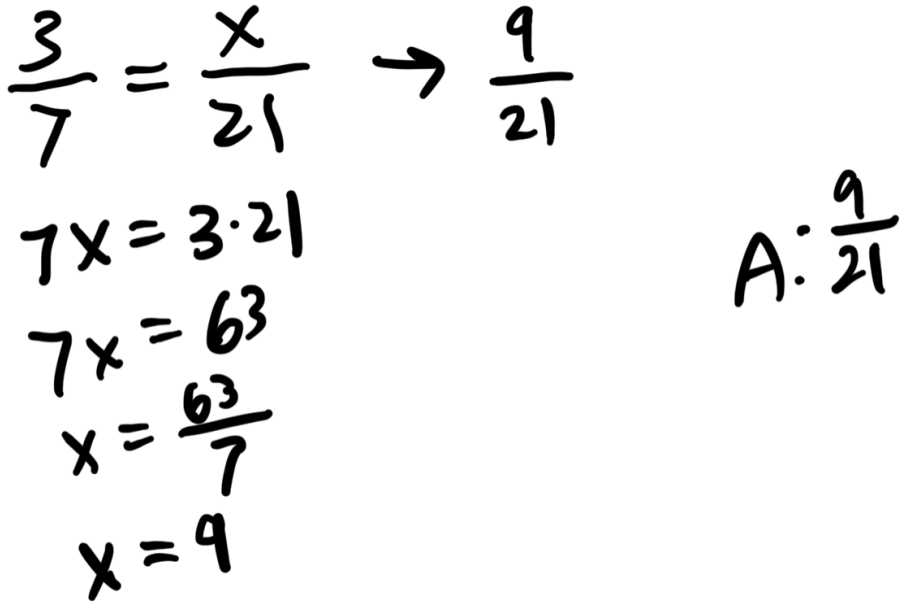
A: $\frac{15}{16}$

5. 290/295



B. Raise the following terms to match the denominator given. Make sure to show your work, including all intermediate steps!

6. 3/7 = x/21



7. 4/5 = x/30

$\frac{4}{5} = \frac{x}{30} \rightarrow \frac{24}{30}$

A: $\frac{24}{30}$

$5x = 4 \cdot 30$

$5x = 120$

$x = \frac{120}{5}$

$x = 24$

8. 8/9 = x/81

$\frac{8}{9} = \frac{x}{81} \rightarrow \frac{72}{81}$

A: $\frac{72}{81}$

$9x = 8 \cdot 81$

$9x = 648$

$x = \frac{648}{9}$

$x = 72$

---

9. 7/8 = x/64

$\frac{7}{8} = \frac{x}{64} \rightarrow \frac{56}{64}$

$8x = 7 \cdot 64$

$8x = 448$

$x = \frac{448}{8}$

$x = 56$

A: $\frac{56}{64}$

10. 5/14 = x/84

$\frac{5}{14} = \frac{x}{84} \rightarrow \frac{30}{80}$

$14x = 5 \cdot 84$

$14x = 420$

$x = \frac{420}{14}$

$x = 30$

A: $\frac{30}{80}$

C. Find the lowest common denominator. Make sure to show your work, including all intermediate steps!

11. ½ and 2/3

$\left[\frac{1}{2}, \frac{2}{3}\right] \rightarrow \left[\frac{3}{6}, \frac{4}{6}\right]$

$2 \cdot 3 = 6$

A: 6

12. ¾ and 2/5

$\left[\frac{3}{4}, \frac{2}{5}\right] \rightarrow \left[\frac{15}{20}, \frac{8}{20}\right]$

$4 \cdot 5 = 20$

A: 20

13. 2/7 and 5/6

$\left[\frac{2}{7}, \frac{5}{6}\right] \rightarrow \left[\frac{12}{42}, \frac{35}{42}\right]$

$7 \cdot 6 = 42$

A: 42

14. 9/15 and 2/12

$\left[\frac{9}{15}, \frac{2}{12}\right] \rightarrow \left[\frac{3}{5}, \frac{1}{6}\right] \rightarrow \left[\frac{18}{30}, \frac{5}{30}\right]$

$5 \cdot 6 = 30$ A: 30

15. 4/17 and 3/16

$\left[\frac{4}{17}, \frac{3}{16}\right] \rightarrow \left[\frac{64}{272}, \frac{51}{272}\right]$

$\begin{array}{r} 17 \\ \times 16 \\ \hline 102 \\ +170 \\ \hline 272 \end{array}$

$\begin{array}{r} 2\,16 \\ \times 4 \\ \hline 64 \end{array}$ $\begin{array}{r} 2\,17 \\ \times 3 \\ \hline 51 \end{array}$ A: 272