

Determine if each student below answered the problem correctly. Explain your reasoning for each response.

1. To convert .45 to a fraction, Zela did the following work:

$$\frac{45}{99} \div 3 = \frac{15}{33} \div 3 = \boxed{\frac{5}{11}}$$

2. To determine if the number $5/16$ is repeating or terminating, Jack did the following work:

$$\begin{array}{r} 3.2 \\ 5 \overline{) 16.0} \\ \underline{15} \downarrow \\ 10 \end{array} \quad \boxed{\frac{5}{16} = 3.2}$$

3. To convert .42 to a fraction, Lucy did the following work:

$$\frac{42}{100} \div 2 = \frac{21}{50}$$

4. To convert $7/80$ to a fraction, Paul did the following work:

$$\begin{array}{r} .087 \\ 80 \overline{) 7.000} \\ \underline{640} \downarrow \\ 600 \\ \underline{560} \end{array} \quad \boxed{\frac{7}{80} = .087}$$

5. To convert .06 to a fraction, Carlos did the following work:

$$\frac{6}{10} = \boxed{\frac{3}{5}}$$

6. To convert $9/11$ to a decimal, Janessa did the following work:

$$\begin{array}{r}
 .818 \\
 11 \overline{) 9.000} \\
 \underline{88} \\
 20 \\
 \underline{11} \\
 90
 \end{array}$$

$$\frac{9}{11} = .\overline{81}$$

7. To determine if $8/18$ is repeating or terminating, Lex did the following work:

$$\frac{8}{18} = \frac{4}{9}$$

This is terminating because any fraction over 9 terminates eventually.

Determine if each number is rational or irrational.

1. $\sqrt{98}$

2. $\sqrt{81}$

3. $\sqrt{20}$

4. $.3\overline{2}$

5. $.3890230\dots$

6. $\frac{1}{9}$

7. $.13\overline{5}$

8. $\sqrt{4}$

9. $\sqrt{15}$