

Lesson 2 Homework Practice

Complex Fractions and Unit Rates

Simplify.

1. $\frac{4}{\frac{1}{5}} = 4 \cdot \frac{5}{1} = \frac{20}{1} = 20$

2. $\frac{\frac{3}{4}}{\frac{1}{2}} = \frac{3}{4} \cdot \frac{2}{1} = \frac{6}{4} = \frac{3}{2} = 1\frac{1}{2}$

3. $\frac{\frac{2}{5}}{\frac{1}{3}} = \frac{2}{5} \cdot \frac{3}{1} = \frac{6}{5} = 1\frac{1}{5}$

4. $\frac{\frac{7}{9}}{\frac{1}{7}} = \frac{7}{9} \cdot \frac{7}{1} = \frac{49}{9} = 5\frac{4}{9}$

5. $\frac{\frac{8}{11}}{\frac{1}{4}} = \frac{8}{11} \cdot \frac{4}{1} = \frac{32}{11} = 2\frac{10}{11}$

6. $\frac{\frac{4}{15}}{\frac{2}{3}} = \frac{4}{15} \cdot \frac{3}{2} = \frac{12}{30} = \frac{2}{5}$

7. $\frac{9}{\frac{10}{6}} = 9 \cdot \frac{6}{10} = \frac{54}{10} = 5\frac{27}{5}$

8. $\frac{20}{\frac{8}{15}} = 20 \cdot \frac{15}{8} = \frac{300}{8} = 37\frac{3}{2}$

9. $\frac{6}{\frac{7}{9}} = 6 \cdot \frac{9}{7} = \frac{54}{7} = 7\frac{5}{7}$

on the video on my website → math → Chpt 2.

10. Johnathan can jog $3\frac{2}{5}$ miles in $\frac{7}{8}$ hour. Determine his average speed in miles per hour.

11. A truck driver drove 120 miles in $1\frac{3}{4}$ hours. What is the speed of the truck in miles per hour?

$\frac{\text{mi}}{\text{hr}} \frac{120}{1\frac{3}{4}} = \frac{120}{\frac{7}{4}} = \frac{120}{1} \cdot \frac{4}{7} = \frac{480}{7} = 68.5714 \approx 68.5 \text{ mph}$

12. Charlotte reads $8\frac{1}{3}$ pages of a book in 10 minutes. What is her average reading rate in pages per minute?

$\frac{\text{pg}}{\text{min}} \frac{8\frac{1}{3}}{10} = \frac{\frac{25}{3}}{10} = \frac{25}{3} \cdot \frac{1}{10} = \frac{5}{6} = 0.833 \text{ pages per min}$

Express each percent as a fraction in simplest form.

13. $45\frac{1}{2}\% = \frac{91}{2} \cdot \frac{1}{100} = \frac{91}{200}$

14. $30\frac{1}{4}\% = \frac{121}{4} \cdot \frac{1}{100} = \frac{121}{400}$

15. $75\frac{1}{3}\% = \frac{226}{3} \cdot \frac{1}{100} = \frac{113}{15} = 7\frac{4}{15}$