

Fractions, Decimals, and Rational Numbers

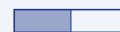
Name: _____ Date: _____ Score: _____ / 18

Quick Review and Helpful Hints

A *rational number* can be written as a fraction $\frac{a}{b}$ of integers. Turn a fraction into a decimal by dividing the top by the bottom. A decimal that *terminates* or *repeats* is rational. To compare, write both numbers in the same form.

▶ **Example:** Write $\frac{3}{4}$ as a decimal. **Work:** Divide the top by the bottom: $3 \div 4 = 0.75$.

★ **Answer:** 0.75



$\frac{1}{2} = 0.5 = 50\%$

◆ Practice Problems

Convert or compare as directed.

- | | |
|--|--|
| <p>1. $\frac{1}{2}$ as a decimal _____</p> <p>2. $\frac{3}{4}$ as a decimal _____</p> <p>3. $\frac{1}{4}$ as a decimal _____</p> <p>4. $\frac{2}{5}$ as a decimal _____</p> <p>5. $\frac{1}{5}$ as a decimal _____</p> <p>6. 0.5 as a fraction _____</p> <p>7. 0.25 as a fraction _____</p> | <p>8. $\frac{1}{10}$ as a decimal _____</p> <p>9. $\frac{3}{5}$ as a decimal _____</p> <p>10. 0.75 as a fraction _____</p> <p>11. $\frac{7}{10}$ as a decimal _____</p> <p>12. Is 0.5 rational? _____</p> <p>13. $\frac{1}{8}$ as a decimal _____</p> <p>14. 0.2 as a fraction _____</p> |
|--|--|

◆ Word Problems

15. A pizza is cut and you eat $\frac{3}{4}$ of it. Write that as a decimal. _____
16. A gas tank is filled to 0.5 of its capacity after a commute. What fraction of the tank is full, in simplest form? _____
17. Which is larger, $\frac{1}{2}$ or 0.4? _____
18. Convert $\frac{2}{5}$ to a decimal. _____



Answer Keys

- | | | |
|--------------------------------------|--------------------------------------|--|
| 1. <input type="text" value="0.5"/> | 7. <input type="text" value="1/4"/> | 13. <input type="text" value="0.125"/> |
| 2. <input type="text" value="0.75"/> | 8. <input type="text" value="0.1"/> | 14. <input type="text" value="1/5"/> |
| 3. <input type="text" value="0.25"/> | 9. <input type="text" value="0.6"/> | 15. <input type="text" value="0.75"/> |
| 4. <input type="text" value="0.4"/> | 10. <input type="text" value="3/4"/> | 16. <input type="text" value="1/2"/> |
| 5. <input type="text" value="0.2"/> | 11. <input type="text" value="0.7"/> | 17. <input type="text" value="1/2"/> |
| 6. <input type="text" value="1/2"/> | 12. <input type="text" value="Yes"/> | 18. <input type="text" value="0.4"/> |

Step-by-Step Explanations

1. Start by naming the process: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $1 \div 2 = 0.5$. So the final answer is 0.5.
2. A good way to think about this is: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $3 \div 4 = 0.75$. So the final answer is 0.75.
3. Step by step: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $1 \div 4 = 0.25$. So the final answer is 0.25.
4. Take it one move at a time: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $2 \div 5 = 0.4$. So the final answer is 0.4.
5. Start by naming the process: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $1 \div 5 = 0.2$. So the final answer is 0.2.
6. A good way to think about this is: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $0.5 = \frac{5}{10} = \frac{1}{2}$. So the final answer is $\frac{1}{2}$.
7. Step by step: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $0.25 = \frac{25}{100} = \frac{1}{4}$. So the final answer is $\frac{1}{4}$.
8. Take it one move at a time: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $1 \div 10 = 0.1$. So the final answer is 0.1.
9. Start by naming the process: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $3 \div 5 = 0.6$. So the final answer is 0.6.
10. A good way to think about this is: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $0.75 = \frac{75}{100} = \frac{3}{4}$. So the final answer is $\frac{3}{4}$.
11. Step by step: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $7 \div 10 = 0.7$. So the final answer is 0.7.
12. Take it one move at a time: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is It terminates, so yes, rational. So the final answer is Yes.
13. Start by naming the process: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $1 \div 8 = 0.125$. So the final answer is 0.125.
14. A good way to think about this is: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $0.2 = \frac{2}{10} = \frac{1}{5}$. So the final answer is $\frac{1}{5}$.
15. Step by step: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $3 \div 4 = 0.75$. So the final answer is 0.75.
16. Take it one move at a time: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $0.5 = \frac{1}{2}$. So the final answer is $\frac{1}{2}$.
17. Start by naming the process: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $\frac{1}{2} = 0.5 > 0.4$. So the final answer is $\frac{1}{2}$.
18. A good way to think about this is: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $2 \div 5 = 0.4$. So the final answer is 0.4.



Keep Building SHSAT Math Skills

Recommended Effortless Math resources



The Most Comprehensive SHSAT Math Preparation Bundle

Use the complete SHSAT Math resource for review, worked examples, extra practice, and test-style questions after each worksheet.



Scan Me
Download Instantly

STUDENT FAVORITE - SHSAT Math for Beginners



SHSAT Math for Beginners 2026

Step-by-step lessons, topic practice, and full review support for students who want a calm path through SHSAT Math preparation.

A strong companion for self-study, tutoring, homework, and targeted review.

PDF Edition



Scan Me
Download Instantly

For more SHSAT Math prep, visit EffortlessMath.com/SHSAT