

Name: _____

Date: _____

Rational = a fraction/repeating/terminating decimal. Irrational = non-repeating, non-ending (most roots, π). Last two are challenge problems.

1. Is $\frac{3}{4}$ rational or irrational?

show your work

2. Is $\sqrt{2}$ rational or irrational?

show your work

3. Is $\sqrt{9}$ rational or irrational?

show your work

4. Is 0.75 rational or irrational?

show your work

5. Is pi rational or irrational?

show your work

6. The product of a rational and an irrational number is ____? (Trainer echo - Jan 2026 Q2!)

show your work

7. Is the sum of $\sqrt{3}$ and $\sqrt{5}$ rational or irrational? (Trainer echo - June 2025 Q14!)

show your work

8. Is the sum of $\sqrt{3}$ and 5 rational or irrational? Explain. (Trainer echo - Aug 2025 Q26!)

show your work

9. Give an example showing irrational $\times$ irrational can be RATIONAL. ★ CHALLENGE

show your work

10. True or false: every repeating decimal is irrational. Explain with 0.333... ★ CHALLENGE

show your work