

Worksheet 1.R: Real Numbers Review | Chapter 1**Write as a decimal. Show all work.***Learning Goal: I can change a fraction into a decimal. (8.NS.1)*

1. $-\frac{13}{40}$

2. $2\frac{5}{8}$

Write as a fraction. Show all work.*Learning Goal: I can change a decimal into a fraction. (8.NS.1)*

3. 1.55

4. $0.\overline{51}$

Simplify each expression. Write with positive exponents. Show all work.*Learning Goal: I can simplify monomials. (8.EE.1)*

5. $5x^6y^2 \cdot 7x^2y^3$

6. $2^4 \times 8^3 \times 2^5 \times 8^2$

7. $(5m^4n^3)^5$

8. $(5^3)^2 \times 5^4$

9. $(7^x)^y$

10. $(4^8)^0$

11. $\frac{24a^{10}}{4a^7}$

12. $\frac{25x^4y}{5xy}$

13. $(-4)^{-6}$

14. x^{-4}

15. x^5y^{-6}

16. $a^4 \cdot a^{-5}$

17. When two monomials are multiplied, what do you do to the powers?

18. When two monomials are divided, what do you do to the powers?

Find the value of the square root.

Learning Goal: I can find square roots and cube roots. (8.EE.2)

19. $\sqrt{144}$

20. $\sqrt{\frac{16}{121}}$

Simplify the following square roots.

21. $\sqrt{60}$

22. $\sqrt{28}$

Perform the indicated operation.

23. $3\sqrt{5} + 7\sqrt{5}$

24. $3\sqrt{5} + (2\sqrt{7} \cdot \sqrt{35})$

Estimate the value of the square root.

Learning Goal: I can estimate square roots and cube roots. (8.NS.2, 8.EE.2)

25. $\sqrt{40}$

26. $\sqrt{500}$

Between which two integers are the following numbers located?

(For example, $\sqrt{5}$ is between integers 2 and 3.)

27. $\sqrt{8}$

28. $-\sqrt{28}$

29. $-\sqrt{55}$

30. $\sqrt{47}$

Classify each number as rational or irrational. Explain your reasoning.

Learning Goal: I can identify rational and irrational numbers. (8.NS.1, 8.NS.2, 8.EE.2)

31. 10

32. π

33. $\sqrt{7}$

34. -7.475

35. 0.12112111211112 ...

36. $\sqrt{144}$

37. 8.675555555 ...

38. $\frac{3}{4}$