**Write as a decimal. Show all work.**

**1.** $-\frac{13}{40}$ **2.** $2\frac{5}{8}$

**Write as a fraction. Show all work.**

**3.** $1.55$ **4.** $0.\overbar{51}$

**Simplify each expression. Write with positive exponents. Show all work.**

**5.** $5x^{6}y^{2}∙7x^{2}y^{3}$ **6.** $2^{4}×8^{3}×2^{5}×8^{2}$

**7.** $\left(5m^{4}n^{3}\right)^{5}$ **8.** $\left(5^{3}\right)^{2}×5^{4}$

**9.** $\left(7^{x}\right)^{y}$ **10.** $\left(4^{8}\right)^{0}$

**11.** $\frac{24a^{10}}{4a^{7}}$ **12.** $\frac{25x^{4}y}{5xy}$

**13.** $\left(-4\right)^{-6}$ **14.** $x^{-4}$

**15.** $x^{5}y^{-6}$ **16.** $a^{4}∙a^{-5}$

**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.**

**19.** $\sqrt{144}$ **20.** $\sqrt{\frac{16}{121}}$

**Estimate the value of the square root.**

**21.** $\sqrt{40}$ **22.** $\sqrt{500}$

**Between which two integers are the following numbers located?**

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

**23.** $\sqrt{8}$ **24.** $-\sqrt{28}$

**25.** $-\sqrt{55}$ **26.** $\sqrt{47}$

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

**27.** $10$ **28.** $π$

**29.** $\sqrt{7}$ **30.** $-7.475$

**31.** $0.12112111211112…$ **32.** $\sqrt{144}$

**33.** $8.6755555555…$ **34.** $\frac{3}{4}$