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**ANSWER: 1**

**Problem: Write the following decimal as a fraction**

**$3.\overline{4}$**

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**ANSWER:**  $3\frac{4}{9}$

**Problem: Simplify.**

$$\frac{(x^4)^2}{x^2}$$

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**ANSWER:  $x^6$**

**Problem: Simplify.**

$$-\sqrt{169}$$

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**ANSWER:  $-13$**

**Problem: Approximate to the nearest integer.**

$$\sqrt[3]{-62}$$

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**ANSWER:**  $\approx -4$

**Problem: Solve the equation.**

$$x^2 + 8 = 152$$

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**ANSWER:  $\pm 12$**

**Problem: Is the following number rational or irrational?**

$$\sqrt{100}$$

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**ANSWER:** *Rational*

**Problem: Write the following in scientific notation.**

**2,390,000**

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**ANSWER:  $2.39 \times 10^6$**

**Problem: Write the following in standard form.**

**$3.478 \times 10^{-5}$**



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**ANSWER: 0.00003478**

**Problem: Perform the given operation. Write your answer in scientific notation.**

$$(6.37 \times 10^{-4})(4.3 \times 10^{12})$$

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**ANSWER:  $2.7391 \times 10^9$**

**Problem: The diameter of a mysterious cell was found to be  $4 \times 10^{-9}$  meters long. Is it more appropriate to report this length as  $4 \times 10^{-9}$  meters or  $4 \times 10^{-12}$  millimeters.**

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**ANSWER:  $4 \times 10^{-12}$  MILLIMETERS**

**Problem: Write the following decimal as a fraction.  
REDUCE!**

**—0.08**

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**ANSWER:**  $-\frac{2}{25}$

**Problem: Name the subset(s) to which this number belongs: Irrational, rational, integer, whole, natural.**

$$-\frac{4}{2}$$

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**ANSWER: RATIONAL, INTEGER**

**Problem: Simplify.**

$$\sqrt{\frac{1}{144}}$$

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**ANSWER:**  $\frac{1}{12}$

**Problem: Solve the equation.**

$$2x^3 = -16$$

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**ANSWER:  $-2$**

**Problem: Approximate to the nearest integer.**

$$\sqrt{67} - 2$$

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**ANSWER:**  $\approx 6$

**Problem: Solve the equation. Approximate to the nearest integer.**

$$\frac{x^3}{3} = 3$$



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**ANSWER:**  $\approx 2$

**Problem: Simplify. Write your answer with positive exponents.**

$$-\frac{2x^{-3}y}{42x^2y^{-5}}$$

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**ANSWER:**  $-\frac{y^6}{21x^5}$

**Problem: Write the following in standard form.**

$$9.23 \times 10^7$$

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**ANSWER: 92,300,000**

**Problem: Write the following in scientific notation.**

**0.00000582**

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**ANSWER:  $5.82 \times 10^{-6}$**

**Problem: Perform the given operation. Write your answer in scientific notation.**

$$\left(7.12 \times 10^5\right) - \left(2.4 \times 10^3\right)$$

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**ANSWER:**  $7.096 \times 10^5$

**Problem: Write the following decimal as a fraction.  
Reduce if necessary.**

$0.1\bar{8}$

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**ANSWER:**  $\frac{17}{90}$

**Problem: Name the subset(s) to which the following belongs: Irrational, rational, integer, whole, natural**

$2\pi$

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**ANSWER: IRRATIONAL**

**Problem: Solve the equation.**

$$x^2 - 3 = 97$$

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**ANSWER:  $\pm 10$**

**Problem: Approximate the following irrational number to the nearest integer.**

$$\sqrt{45}$$



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**ANSWER:**  $\approx 7$

**Problem: Approximate the following irrational number to the nearest integer.**

$$2x^2 = 30$$

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**ANSWER:**  $\approx \pm 4$

**Problem: Simplify. Write your answer with positive exponents.**

$$k^{-5}$$

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**ANSWER:**  $\frac{1}{k^5}$

**Problem: Write the following in scientific notation.**

**320,800,000**

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**ANSWER:  $3.208 \times 10^8$**

**Problem: Write the following in scientific notation.**

**0.0000289**

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**ANSWER:  $2.89 \times 10^{-5}$**

**Problem: Perform the given operation. Write your answer in scientific notation.**

$$\frac{9 \times 10^{-4}}{6 \times 10^8}$$

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**ANSWER:  $1.5 \times 10^{-12}$**

**Problem: Approximate the following irrational number to the nearest integer.**

$$3\pi$$

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**ANSWER:**  $\approx 9$

**Problem: Simplify. Write your answer using positive exponents.**

$$\left(4r^4p^6\right)^2$$

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**ANSWER:**  $4^2 r^8 p^{12}$

**Problem: Simplify.**

$$\left( \frac{12e^5}{5} \right)^0$$