Scientific Notation/Evaluate Powers & Roots

Long-Term Memory Review – Grade 8

Review 1

1. Explain how to change 2,006 into scientific notation.

2. Complete the table below:

Scientific Notation	Standard Form
2.37×10^{2}	
	875
6.80×10^{-1}	
	0.604

3. Evaluate the following:

a) $5^{2} \cdot 5^{4}$ b) $\sqrt{25} + 10$ c) 7^{0}

4. Which of the following best represents the expression $\left(3^{2}\right)^{4}$?

A. 3^{6} B. 6^{4} C. 3^{8} D. 3^{16}

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Long-Term Memory Review – Grade 8
Review 2

1. Explain how to change 36,702 into scientific notation.

2. Complete the table below:

Scientific Notation	Standard Form
1.37×10^{-3}	
3.80×10^{4}	38,000
	0.01004

3. Evaluate the following:

a) $\left(4^{1}\right)^{3}$ b) $\frac{5^{3}}{5^{2}}$ c) $\left(4^{1}\right)^{0}$

4. Which of the following best represents -21?

A. $\sqrt{16}+(-30-5)$ B. $(-5+30)-\sqrt{16}$ C. $\sqrt{16}-(30-5)$ D. $\sqrt{16}+(5+30)$

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Long-Term Memory Review – Grade 8
Review 3

1. Explain how to change 0.0012 into scientific notation.

2. Complete the table below

Scientific Notation	Standard Form
2.07×10^6	
	0.008705000

3. Evaluate the following:

a) $3^2 \cdot 3^4$ b) $\left(3^2\right)^2$ c) $4\sqrt{36}$

4. Which of the following best represents the expression $\left(4^2\right)^3$?

A. 4^5 B. 8^5 C. 4^6 D. 8^3

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Long-Term Memory Review – Grade 8
Review 4

1. Explain how to change 50.325 into scientific notation.

2. Complete the table below:

Scientific Notation	Standard Form
	8,705,000
5.80×10^{-4}	

3. Evaluate the following:

a) $3^2 \cdot 3^5$ b) $\left(1^3\right)^2$ c) $\frac{5^6}{5^3}$ d) $3\sqrt{81}+10$

4. Which of the following expressions best represents 32?

A. $\sqrt{49}+(-8+13)^2$ B. $(-8+13)^2-\sqrt{49}$ C. $\sqrt{49}-(-8+13)^2$ D. $\sqrt{49}+(-8-13)^2$

Scientific Notation/Evaluate Powers & Roots

Long-Term Memory Review – Grade 8

Quiz

1. Explain how to change 0.000015 into scientific notation.

2. Complete the table below:

Scientific Notation	Standard Form
2.37×10^{2}	
	8,705,000
6.80×10^{-1}	
	0.00604

3. Evaluate the following:

a) $5^{2} \cdot 5^{5}$ b) $\left(2^{3}\right)^{2}$ c) $\frac{3^{6}}{3^{2}}$ d) $4\sqrt{25}+12$

4. Which of the following best represents the expression $\left(4^{2}\right)^{5}$

A. 4^{7} B. 4^{10} C. 4^{25} D. 8^{5}

5. Which of the following expressions best represents -21?

A. $\sqrt{16}+(-8+13)^{2}$ B. $(-8+13)^{2}-\sqrt{16}$ C. $\sqrt{16}-(-8+13)^{2}$ D. $\sqrt{16}+(-8-13)^{2}$

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Answers

Review 1 Answers

1. The decimal point, to the right of 6, would move 3 places to the left, 2.006, and then multiply by 10^3, 2.006×10^3.

2.

2.37×10^2	237
8.75×10^2	875
6.80×10^{-1}	0.680
6.04×10^{-1}	0.604

3. a) $5^6=15{,}625$ b) 15 c) 1

4. C. 3^8

Review 2 Answers

1. The decimal point, to the right of 2, would move 4 places to the left, and then multiply by 10^4; 3.6702×10^4

2.

1.37×10^{-3}	0.00137
3.80×10^4	38,000
1.004×10^{-2}	0.01004

3. a) $4^3=64$ b) $5^1=5$ c) 1

4. C. $\sqrt{16}-(30-5)$

Review 3 Answers

1. The decimal point would move 3 places to the right, and then multiply by 10^{-3}; 1.2×10^{-3}

2.

2.07×10^6	2,070,000
8.705×10^{-3}	0.008705000

3. a) $3^6=729$ b) $3^4=81$ c) 24

4. C. 4^6

Review 4 Answers

1. The decimal point would move 1 place to the left, and then multiply by 10^{-1}; 5.0325×10^{-1}

2.

8.705×10^6	8,705,000
5.80×10^{-4}	0.00058

3. a) $3^7=2187$ b) $1^6=1$ c) $5^3=125$ d) 37

4. A. $\sqrt{49}+(-8+13)^2$

Quiz - Answers

1. The decimal point would move 5 places to the right, and then multiply by 10^{-5}; 1.5×10^{-5}

2.

2.37×10^5	237,000
8.705×10^6	8,705,000
6.80×10^{-1}	0.680
6.04×10^{-3}	0.00604

3. a) $5^7=78{,}125$ b) $2^6=64$ c) $3^4=81$ d) 32

4. B. 4^{10}

5. C. $\sqrt{16}-(-8+13)^2$