Chapter 1 Study Guide

1. Evaluate the expression.

$$-8^2 + 18 \div 3 = \boxed{}$$

Grade 7: FL 2023>Chapter 1>Chapter 1. Chapter Test (1 - 18)> Question #2

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2. Simplify the expression. Write your answer as a power.

$$\frac{3^7}{3^5} = \boxed{}$$

Grade 7: FL 2023>Chapter 1>Chapter 1: Chapter Test (1 - 18)

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3. Simplify the expression. Write your answer as a power.

$$4^8 \cdot 4^7 = \boxed{}$$

Grade 7: FL 2023>Chapter 1>Chapter 1: Chapter Test (1 - 18)

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4. Simplify the expression. Write your answer as a power.

$$\left(6^4\right)^2 = \boxed{}$$

Grade 7: FL 2023>Chapter 1>Chapter 1: Chapter Test (1 - 18)

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5. Simplify the expression. Write your answer as a product of powers.

$$(6 \cdot 3)^7 = \boxed{}$$

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6. Simplify the expression. Write your answer as a power.

$$7^4 \cdot 7^0 = \square$$

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7. Find the absolute value.

$$|19| = \square$$

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8. Find the absolute value.

$$\left| -\frac{1}{7} \right| = \square$$

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9. Complete the statement using $<$, $>$, or $=$.

$$|-8.6| \; \boxed{} \; |8.5|$$

| :: < | :: > | :: = |

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10. Write the product using exponents.

$$\left(-\frac{3}{10} \right) \bullet \left(-\frac{3}{10} \right) = \square$$

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11. Write the product using exponents.

$$4.9 \cdot 4.9 = \boxed{}$$

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12. Latitude is a measure of how far a location on Earth's surface is above or below the equator. Houston, Texas is located at a latitude of about $29.760°$. Perth, Australia is located at a latitude of about $-31.956°$.

Which city is closer to the equator?

○ Houston, Texas

○ Perth, Australia

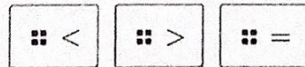Grade 7: FL 2023>Chapter 1>Chapter 1: Chapter Test (1 - 18)

13. Simplify the expression. Write your answer as a power.

$$\frac{4^3 \cdot 4^7}{4^2} = \boxed{}$$

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14. Complete the statement using $<$, $>$, or $=$.

$$\left|4\tfrac{2}{5}\right| \; \boxed{} \; \left|-4\tfrac{1}{3}\right|$$

| :: < | :: > | :: = |

~~exades~~ Write the product using exponents.

$$\frac{3^2 \cdot 3^6}{3^2} \cdot \frac{3^5}{3}$$

order from least to greatest.

$$-2.1, \; |5|, \; |4|, \; 8, \; -\frac{7}{12}$$

VOCAB:

Define the following:

1. Power –

2. Base –

3. Exponent –

4. Product –

5. Quotient –

6. Integers –

7. Rational numbers –

8. Absolute value -

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17. Which expressions simplify to 7^9 using the Product of Powers and the Quotient of Powers Properties?

☐ $7^3 \cdot 7^3$

☐ $\frac{7^6}{7^3}$

☐ $\frac{7^{11}}{7^3}$

☐ $7^{12} \cdot 7^3$

☐ $7^6 \cdot 7^3$

☐ $\frac{7^{12}}{7^3}$