

**Pre-Algebra**  
**Spiral Set C**

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**Multiple Choice:** Circle the letter of the correct answer. Show all necessary work in the space provided.

1. Which expression is equivalent to  $9.6 + 4.4s - 2.8s + 4.8$ ?

- A.  $0.8(6 + 2s)$       B.  $1.6(9 + s)$   
C.  $3.2(3 + 2s)$       D.  $7.2(2 + s)$
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2. Which number is equivalent to  $\frac{49}{11}$ ?

- A. 4.45      B.  $4.\overline{45}$   
C.  $4.4\overline{5}$       D. 4.4545
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3. Shelby has a \$20 gift card to an online music store. She downloads songs that cost \$1.20 each. Which expression models the amount of money she has left on the gift card if she downloads  $x$  songs?

- A.  $1.20x - 20$       B.  $20x - 1.20$   
C.  $20 - 1.20x$       D.  $1.20 - 20x$
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4. One scuba diver descended 15 meters below the surface of a lake. Another diver descended 8 meters below the surface. At the same time, a seagull was flying 2 meters above the lake's surface, and another seagull was flying 10 meters above the surface. Which situation has the greatest absolute value in relation to the surface of the lake? [The surface of the lake is 0 feet.]

- A. The scuba diver that is 15 meters below the lake's surface.  
B. The scuba diver that is 8 meters below the lake's surface.  
C. The seagull that is 2 meters above the lake's surface.  
D. The seagull that is 10 meters above the lake's surface.

5. Simplify the expression:  $\frac{1}{2} \div \frac{-2}{3} \times \frac{3}{4} - \frac{4}{5}$

A.  $-\frac{9}{5}$

B.  $-\frac{109}{80}$

C.  $-\frac{21}{20}$

D.  $\frac{3}{80}$

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6. While doing her math homework, Nicole wrote the following sentence in her notebook:

$$\frac{1}{2} + \left( \frac{2}{3} + \frac{-4}{5} \right) = \left( \frac{1}{2} + \frac{2}{3} \right) + \left( -\frac{4}{5} \right)$$

Which property did Nicole use?

A. commutative property of addition

B. associative property of addition

C. distributive property

D. identity property of addition

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7. The size of a molecule is  $6.02 \times 10^{-23}$  units. If we magnify it one million times, what is the size of the image?

A.  $6.02 \times 10^{-18}$  units

B.  $6.02 \times 10^{-17}$  units

C.  $60.2 \times 10^{-17}$  units

D.  $6.02 \times 10^{-19}$  units

**Extended Response:** Show all necessary work.

8. What is the result when  $0.81x - 0.45$  is subtracted from  $3.28x + 1.4$ ? Final answer must be written in simplest form.

9. What is the value of the expression?  $\frac{(4.5 \times 10^6)}{(1.5 \times 10^3)} \times (2.4 \times 10^{-8})$

10. Order the exponential expressions from **least** to **greatest**. Justify your response.

$(-2)^4$

$4^{-2}$

$(2^2)^{-3}$

$(-4)^3$

$4^0$