

**Pre-Algebra**  
**Spiral Set D**

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

1. When  $A = -9$  and  $B = -6$ , which expression has a value of  $-3$ ?

- A.  $A + B$                   B.  $|A + B|$                   C.  $A - B$                   D.  $|A - B|$
- 

2. Which value is a whole number but *not* a natural number?

**1**                   **$\pi$**                   **-2**                  **0**

- A. 1                  B.  $\pi$   
C. -2                  D. 0
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3. Solve:  $\frac{1}{3}(2t - 3) = t - 9$

- A.  $t = 6$                   B.  $t = -24$   
C.  $t = 24$                   D.  $t = 30$
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4. All of the expressions below are equivalent to  $\frac{3^{-8}}{3^{-4}}$  **except**

- A.  $\frac{1}{81}$                   B.  $3^{-8} \cdot 3^4$   
C.  $1^{-4}$                   D.  $1 \div 3^4$

5. Which expression is equivalent to the expression shown below?

$$-\frac{1}{2}\left(-\frac{3}{2}x + 6x + 1\right) - 3x$$

- A.  $\frac{3}{2}x - \frac{1}{2}$
  - B.  $6\frac{3}{4}x - \frac{1}{2}$
  - C.  $-\frac{3}{4}x + \frac{1}{2}$
  - D.  $-5\frac{1}{4}x - \frac{1}{2}$
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6. Ms. Gartland bought  $x$  number of shirts for the new members of her chorus. The cost for  $x$  number of shirts, including \$3.99 shipping was \$77.49. Each shirt cost \$12.25. There was no sales tax on this purchase. Which equation could be used to find  $x$ ?

- A.  $3.99(x + 12.25) = 77.49$
  - B.  $3.99x + 12.25 = 77.49$
  - C.  $12.25(x + 3.99) = 77.49$
  - D.  $12.25x + 3.99 = 77.49$
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**Extended Response: Show all necessary work.**

7. Which expressions are a factor of  $-48xyz - 24xy + 40xyz$ ? Select all that apply.

- A. 4
- B.  $3x$
- C.  $8y$
- D.  $2xy$
- E.  $6xy$
- F.  $xyz$

8. Factor the expression  $18d^2 + 45d^6$  by factoring out the GCF.

9. A number,  $n$ , is multiplied by  $-\frac{5}{8}$  and the result is  $-0.4$ . What is the value of  $n$ ?

10. Find the value of the expression.  $\frac{5}{(-1.5+9.5)} + \frac{0.4(7+11)}{-0.2}$