Answer each question completely. Show all work where indicated for full credit. (10 points each)

1. Which statement is not true?
   A $\sqrt{8} = 2\sqrt{2}$       B $\sqrt{40} = 2\sqrt{10}$       C $\sqrt{64x^4y^6} = 8x^2y^2$       D $\sqrt{16a^2b^4} = 4ab^2$

2. Choose all of the correct statements.
   F $\sqrt{64} = 8$       G $\sqrt{64} = 8$       H $x + x + x = x^3$       J $-4^2 = -16$       K $x^2 \cdot x^4 = x^6$

3. What is the value of $\sqrt{128}$ in simplest radical form?
   A) $8\sqrt{2}$       B) $64\sqrt{2}$       C) $4\sqrt{8}$       D) $16\sqrt{8}$
   Work:

4. Which is the solution to $4(3x + 2) = -4$?
   F $x = -\frac{1}{3}$       G $x = -1$       H $x = 1$       J $x = \frac{1}{2}$
   Work:

5. What would be the slope of a line perpendicular to the line $2x + 3y = 9$?
   A $\frac{2}{3}$       B $-\frac{2}{3}$       C $\frac{3}{2}$       D $-\frac{3}{2}$
   Work:
6. What is the value of this expression when \( n = -15 \)?

\[-2|n + 6|\]

A) \(-42\)  B) \(-18\)  C) \(18\)  D) \(42\)

**Work:**

7. Which expression is equivalent to \((2x^{-2})^3(3x^{-3})\)?

\[\frac{18x^8}{x^9}\]

A) \(18x^8\)  B) \(\frac{18}{x^9}\)  C) \(24x^8\)  D) \(\frac{24}{x^9}\)

**Work:**

8. Which of the following is equivalent to \(\frac{a^{12}b^2}{a^3b^6}\)?

A) \(\frac{a^9}{b^4}\)  B) \(\frac{b^4}{a^9}\)  C) \(\frac{a^4}{b^3}\)  D) \(a^9b^4\)

**Work:**

9. What is the value of this expression when \( a = 27 \) and \( b = -4 \)?

\[b^2 - 3\sqrt[3]{a}\]

**Work:**

10. When \( x > 0 \) and \( y > 0 \), which expression is equivalent to \(\sqrt{12x^3y^4}\) in simplest form?

A) \(4xy^2\sqrt{3x}\)  B) \(4x^2y^2\sqrt{3x}\)  C) \(2xy^2\sqrt{3x}\)  D) \(2x^2y^2\sqrt{3x}\)

**Work:**