CA Algebra 1 Standard 10.0

MULTIPLE CHOICE

1. The area of a rectangle is $32x^5y^3$ square units. One side of the rectangle is $4x^2y$ units long. How long is the other side of the rectangle?

   A. $8x^3y^2$ units
   B. $28x^3y^2$ units
   C. $36x^7y^4$ units
   D. $128x^3y^2$ units

2. What is the simplest form of the expression $\frac{8x^4}{28x^9}$?

   A. $\frac{2}{14x^5}$
   B. $\frac{4x^5}{7}$
   C. $\frac{2}{7x^5}$
   D. $\frac{4}{7x^5}$

3. Find the difference of the expression below.
   $(-4f^2 + 2f + 2) - (-8f + 3)$

   A. $-4f^2 + 10f - 1$
   B. $-4f^2 - 6f - 1$
   C. $-4f^2 - 6f + 5$
   D. $-4f^2 + 10f + 5$

4. Kyle wants his new rectangular garden to have half of the perimeter of his old rectangular garden. The sides of his old garden are $5x + 7y - 2z$ and $10x + 4z - 3y$ units long. What will be the new perimeter of the garden?

   A. $7.5x + 2y + z$ units
   B. $15x + 4y + 2z$ units
   C. $25x - 10.5y - 4z$ units
   D. $30x + 8y + 4z$ units

5. $(-5x^2 - x + 4) + (4x^3 - 4x^2 + 3)=$

   A. $-4x^3 - x^2 - x + 7$
   B. $-x^3 - 5x^2 + 7$
   C. $4x^3 - 9x^2 - x + 7$
   D. $4x^2 - x^2 + x + 7$

6. The base of a triangle is $20x^2y$ units long. The height of the triangle is $5xy^3$ units long. What is the area of the triangle?

   A. $25x^3y^4$ square units
   B. $50x^2y^3$ square units
   C. $50x^3y^4$ square units
   D. $100x^3y^4$ square units

7. $(y^2 + y) - 7(4y^2 - 5y) + 2 =$

A. $-27y^2 + 34y + 2$
B. $-28y^2 + 35y + 2$
C. $-10y^2 - 34y + 2$
D. $-27y^2 + 36y + 2$

8. The perimeter of a triangle is $16a + 12b$ units long. If two sides of the triangle are $2a + 5b$ and $4a - 2b$ units long. What is length of the third side of the triangle?

A. $8a + 2b$ units
B. $8a - 10b$ units
C. $10a + 5b$ units
D. $10a + 9b$ units

9. Two sides of a rectangle are given. One side is $x^2 - 2x + 3$ units long. The other side is $2x^2 + 3x + 4$ units long. What is the perimeter of the rectangle?

A. $3x^2 + x + 7$ units
B. $2x^4 - x^3 + x + 12$ units
C. $2x^2 - x + 14$ units
D. $6x^2 + 2x + 14$ units

10. $(2y + 3x)(5x - 7y) =$

A. $15x - 11xy - 14y$
B. $15x^2 - 31xy - 14y^2$
C. $15x^2 - 11xy - 14y^2$
D. $8x - 5y$