Read and solve.

1. Which is equivalent to $(3a + b)(2a - 4b)$?   (DOK 2)

    A. $5a - 3b$
    B. $6a^2 - 4b^2$
    C. $5a^2 - 10ab + 5ab^2$
    D. $6a^2 - 10ab - 4b^2$
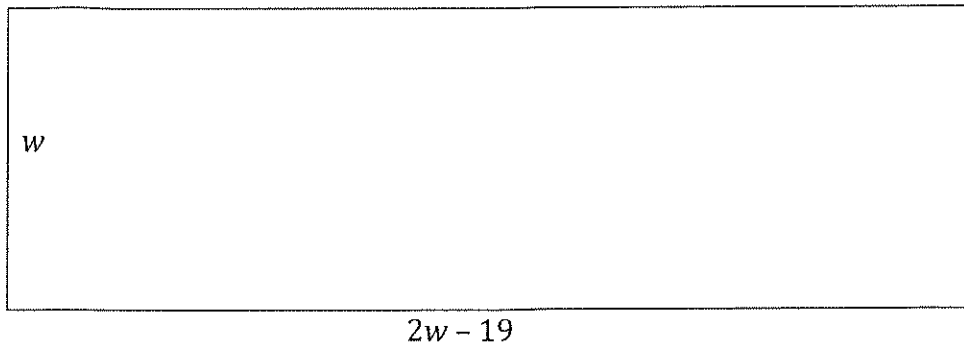
2. Which is equivalent to $(5x^2 + 4x + 1) + (-7x + 2)$? (DOK 2)

    A. $-2x^2 + 6x + 1$
    B. $5x^2 - 3x - 1$
    C. $5x^2 - 3x + 3$
    D. $5x^2 + 11x + 3$

3. Which is equivalent to $(7g + 8h - 9) + (-g - 3h - 6k)$?   (DOK 2)

    A. $6g + 5h - 15k$
    B. $6g + 5h - 6k - 9$
    C. $-7 - 2h + 54k$
    D. $8g + 11h + 6k - 9$

4. Which is equivalent to $(3m + 6n - 5) - (2m - 3n + 6)$? (DOK 2)

    A. $m - 3n + 1$
    B. $m - 3n - 1$
    C. $m + 9n - 11$
    D. $-5m - 9n - 11$

5. Which is equivalent to $(7x - 2)(3x + 4)$? (DOK 2)

    A. $10x^2 + 6x + 2$
    B. $21x^2 - 8$
    C. $21x^2 + 22x - 8$
    D. $21x^2 + 28x - 2$

6. The length of a rectangular classroom floor is 19 feet less than twice the width.

$$w$$

$$2w - 19$$

Which expression represents the area of the classroom floor? (DOK 2)

    A. $3w - 19$
    B. $6w - 38$
    C. $2w^2 - 19w$
    D. $2w^2 - 19$

7. Which is equivalent to $(6x - 4y)^2$?   (DOK 2)

    A. $36x^2 - 16y^2$
    B. $12x^2 - 24xy - 8y^2$
    C. $36x^2 - 24xy + 16y^2$
    D. $36x^2 - 48xy + 16y^2$

8. $2\sqrt{6} + 5\sqrt{6}$ **(DOK 2)**
    A. $7\sqrt{12}$
    B. $10\sqrt{36}$
    C. $7\sqrt{6}$
    D. $10\sqrt{6}$

9. $\sqrt{12} \cdot \sqrt{3}$ **(DOK 2)**
    A. $\sqrt{15}$
    B. $\sqrt{6}$
    C. $\sqrt{36}$
    D. 6

10. $4\sqrt{28} - \sqrt{7}$ **(DOK 2)**
    A. $7\sqrt{7}$
    B. $9\sqrt{7}$
    C. $15\sqrt{7}$
    D. None of the above.

11. Which is an example of the sum of a rational number and irrational number being irrational? (DOK 2)

    A. $\dfrac{\Pi}{\Pi}$

    B. $\sqrt{3} + \sqrt{4}$
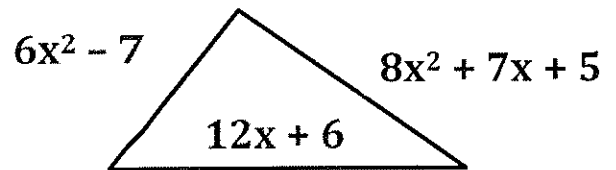
    C. $4 + \sqrt{36}$

    D. $\sqrt{3} + \Pi$

12. Which is an example of the product of a rational number and an irrational number being irrational? (DOK 2)

    A. $\sqrt{16} \cdot \Pi$

    B. $\sqrt{3} \cdot \sqrt{3}$

    C. $\sqrt{3} \cdot \sqrt{5}$

    D. $3 \cdot 5$

Constructed Response

13. How many inches are there in 125.6 cm? Show all of your work. (There are 2.54 cm in 1 in) (DOK 2)

14. Find the perimeter of the triangle pictured. (DOK 2)

$6x^2 - 7$ $8x^2 + 7x + 5$

$12x + 6$

15. A triangle has a perimeter $10x^2 - 3xy + 6y^2$. If two sides are known to be $2x^2 + 2xy$ and $7x^2 + 3y^2$, then what is the length of the third unknown side? (DOK 3)