**NAME**_____**DATE**_____**PER.**_____

# ADD AND SUBTRACT POLYNOMIALS

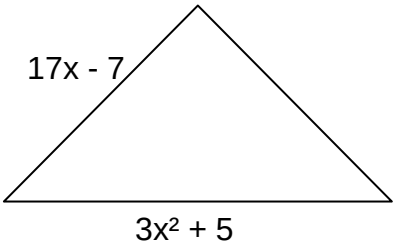
**Find each sum or difference.**

| | |
|---|---|
| 1) $( 3 + 2a + a^2 ) + ( 5 – 8a + a^2 )$ | 2) $( 5x^2 – 4x + 3 ) – ( 3x^2 + 8x + 4 )$ |
| 3) $(2x^2 + 5x – 3) – (2x^2 – 8x + 1)$ | 4) $(5x – 6) + (4x^2 – 2x – 7)$ |

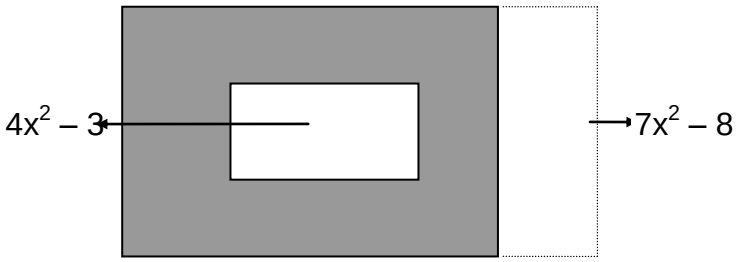
**Answer each problem as indicated.**

5) Find the perimeter of a triangle if the three sides are $4x^2 – x + 4$, $2x^2 – 2x + 1$, and $x^2 + 8x + 3$.

6) The measures of two sides of a triangle are given. The perimeter of the triangle is $13x^2 - 14x + 12$. Find the measure of the third side.




7) Find the area of the shaded region if $7x^2 – 8$ is the area of the total region and $4x^2 – 3$ is the area of the unshaded region.



8) Find the total area of the figure if the shaded region is $6x^2 - 2x + 3$ and the corners are square regions with <u>each</u> having an area $4x^2$.

**Review. Show appropriate work.**

9) A training company offers beginner and intermediate computer classes. The beginner class costs \$125 and lasts 3 hours. The intermediate class costs \$190 and lasts 5 hours. The computer lab fee for each class is the same and is included in the cost. Which system of equations represents the hourly cost, *c*, and the laboratory fee, *f*, for these two classes?

A. $3c + f = 190$
$5c + f = 125$

C. $3c + f = 125$
$5c + f = 190$

B. $3f + c = 190$
$5f + c = 125$

D. $3f + c = 125$
$5f + c = 190$

10. $(4a^5b^2)^2 =$

11. $\frac{-18m^9}{3m^3} =$

12. $(-4x^4y^3)(-7y^{-3}) =$

13. $\frac{36x^8y^{-4}}{9x^4y^0} =$

14. $(4s^3t)(s^2t^3u)(-2st^2u^4) =$

15. $(2^0a^3b^6c)^2 =$