Class/Homework

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MUST USE ALGEBRA TILES

3 (ab)
4) MUST USE ALGEBRA TILES
5 ac
6ac   **#12**
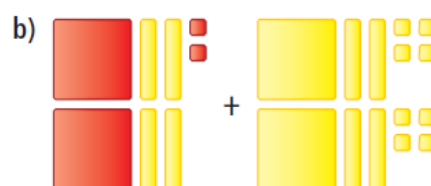8acefh   **#14**
9acefh   **#15ace**
         #16a
10a(i, iv)

3. Write the polynomial sum modelled by each set of tiles.

a)

b)

4. Explain how to use algebra tiles to determine $(3x^2 + 2) + (x^2 - 1)$. What is the sum?

$(3x^2 + 2) + (x^2 - 1).$ = 4x² + 1

5. Use algebra tiles to model each sum of binomials. Record your answer symbolically.

a) $(5g + 3) + (2g + 4)$

b) $(3 - 2j) + (-4 + 2j)$

c) $(p + 1) + (5p - 6)$

d) $(7 + 4m) + (-5m + 4)$

6. Add these polynomials. Visualize algebra tiles if it helps.

a) $2x + 4$
$+ 3x - 5$

b) $3x^2 + 5x$
$+ -2x^2 - 8x$

c) $3x^2 + 5x + 7$
$+ -8x^2 - 3x + 5$

8. Add by collecting like terms

a) $(6x + 3) + (3x + 4)$

b) $(5b - 4) + (2b + 9)$

c) $(6 - 3y) + (-3 - 2y)$

d) $(-n + 7) + (3n - 2)$

e) $(-4s - 5) + (6 - 3s)$

f) $(1 - 7h) + (-7h - 1)$

g) $(8m + 4) + (-9 + 3m)$

h) $(-8m - 4) + (9 - 3m)$

9. Add the following by collecting like terms

a) $(4m^2 + 4m - 5) + (2m^2 - 2m + 1)$ b) $(3k^2 - 3k + 2) + (-3k^2 - 3k + 2)$

c) $(-7p - 3) + (p^2 + 5)$ d) $(9 - 3t) + (9t + 3t^2 - 6t)$
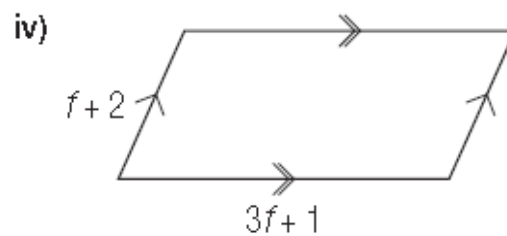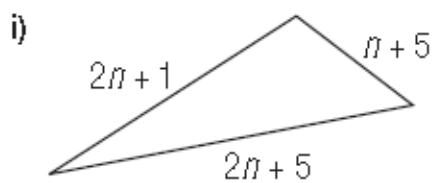
e) $(3x^2 - 2x + 3) + (2x^2 + 4)$　　　f) $(3x^2 - 7x + 5) + (6x - 6x^2 + 8)$
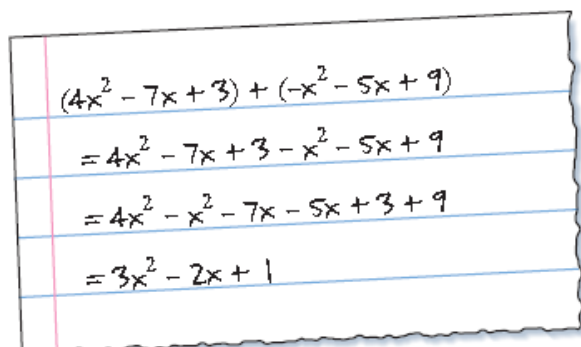
g) $(6 - 7x + x^2) + (6x - 6x^2 + 10)$　　h) $(1 - 3r + r^2) + (4r + 5 - 3r^2)$

10. a) For each shape below, write the perimeter:
- as a sum of polynomials
- in simplest form

i)

iv)

12. A student added $(4x^2 - 7x + 3)$ and $(-x^2 - 5x + 9)$ as follows.

$$(4x^2 - 7x + 3) + (-x^2 - 5x + 9)$$
$$= 4x^2 - 7x + 3 - x^2 - 5x + 9$$
$$= 4x^2 - x^2 - 7x - 5x + 3 + 9$$
$$= 3x^2 - 2x + 1$$

Is the student's work correct?
If not, explain where the student made any errors and write the correct answer.

14. The sum of two polynomials is
$12m^2 + 2m + 4$.
One polynomial is $4m^2 - 6m + 8$.
What is the other polynomial?
Explain how you found your answer.

$$4m^2 - 6m + 8$$
$$+ ()$$
$$\overline{}$$
$$12m^2 + 2m + 4$$

15. Create a polynomial that is added to
$3x^2 + 7x + 2$ to get each sum.

a) $5x^2 + 10x + 1$

$5x^2 + 10x + 1$

$+ ($ $)$

_____

$3x^2 + 7x + 2$

b) $2x^2 + 5x + 8$

c) $4x^2 + 3x$

d) $-x^2 + x - 1$

e) $2x + 3$

f) 4

16. a) What polynomial must be added to
$5x^2 + 3x - 1$ to obtain a sum of 0?
Justify your answer.

$$5x^2 + 3x - 1$$
$$+ (\qquad)$$
$$\overline{}$$
$$0x^2 + 0x + 0$$