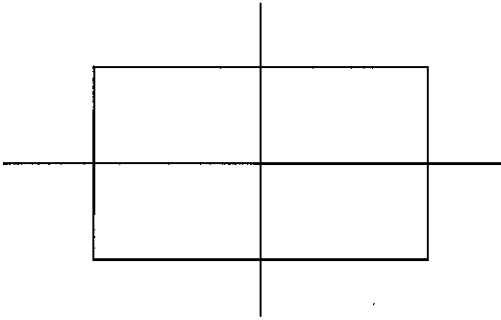


Algebra 1
Factoring Trinomials Homework

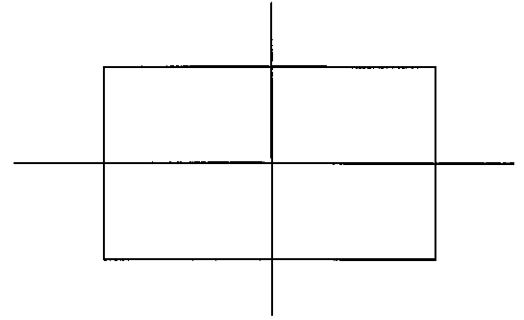
Name: _____

Directions: Factor each expression.

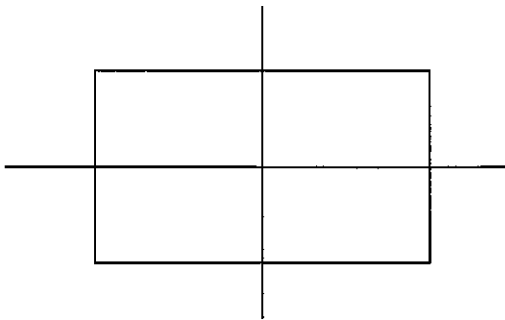
1) $2x^2 + 3x + 1$ _____



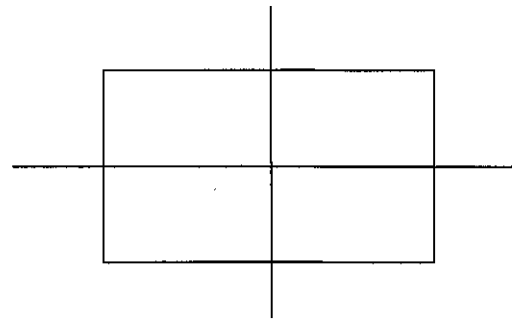
2) $3x^2 - x - 4$ _____



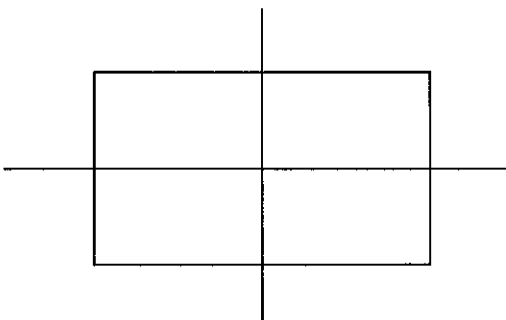
3) $7x^2 + 9x + 2$ _____



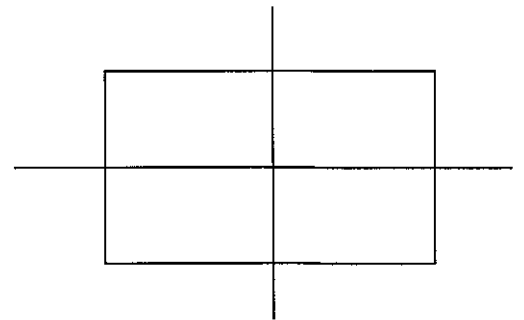
4) $6x^2 - 7x - 10$ _____



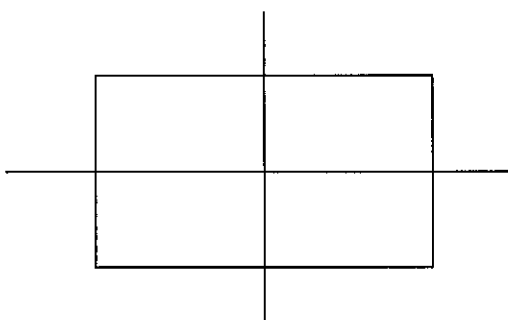
5) $5x^2 + 2x - 3$ _____



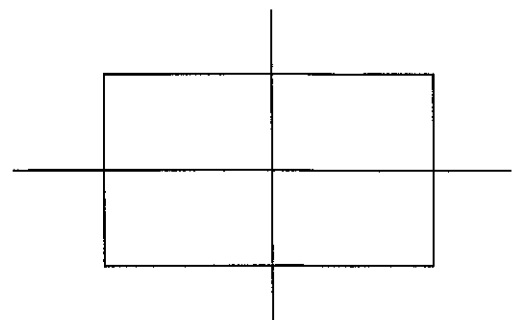
6) $3x^2 + 8x + 5$ _____



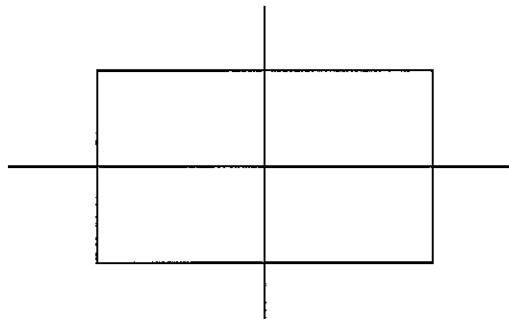
7) $5x^2 - 22x + 8$ _____



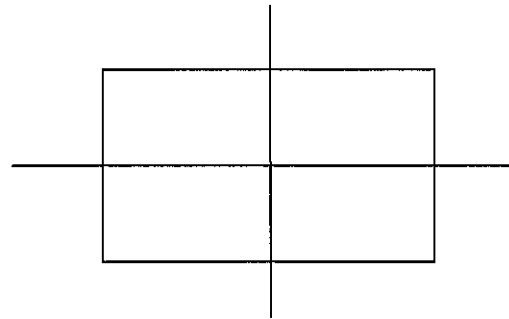
8) $3x^2 + 7x - 6$ _____



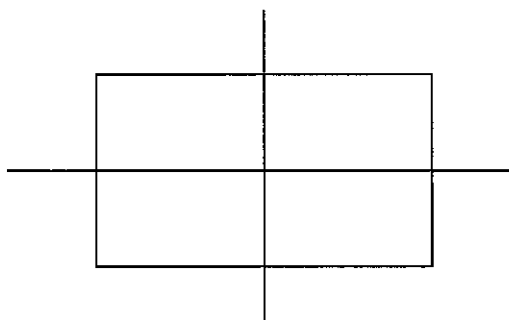
9) $16x^2 - 44x - 12$ _____



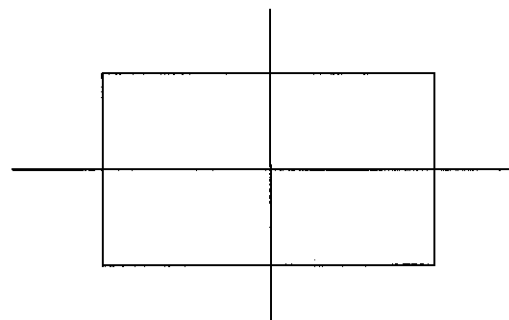
10) $-14x^2 + 60x - 16$ _____



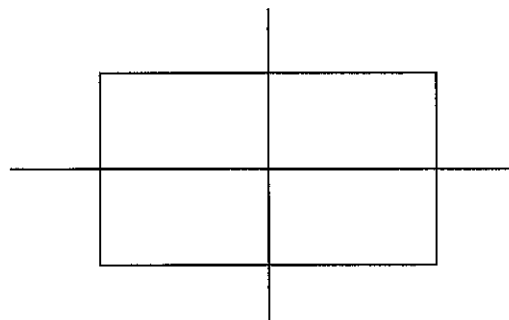
11) $12x^2 + 30x - 18$ _____



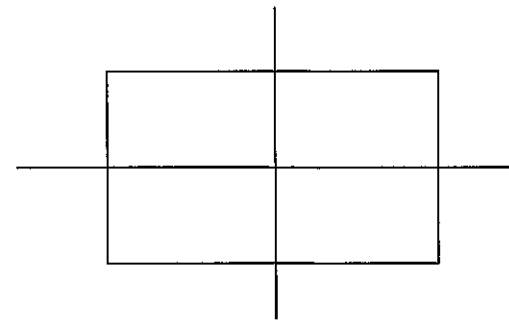
12) $8x^2 - 4x - 84$ _____



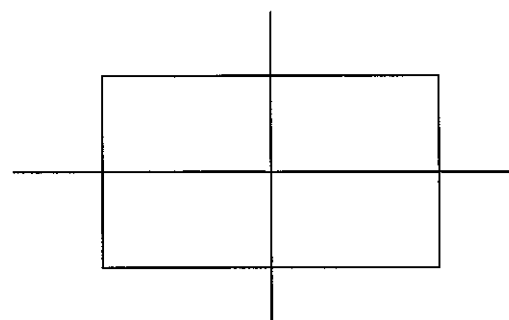
13) $-9x^2 + 21x + 18$ _____



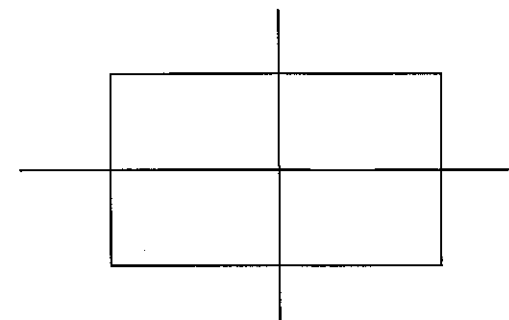
14) $18x^2 - 45x - 108$ _____



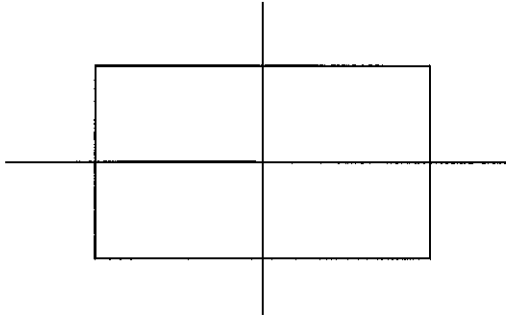
15) $48x^2 - 28x + 4$ _____



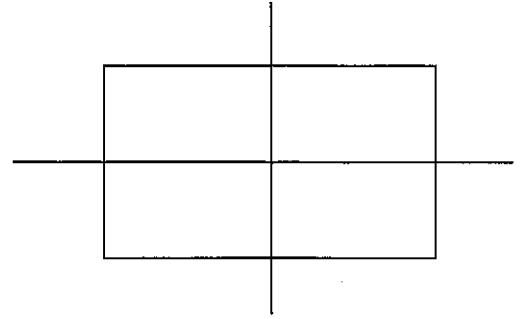
16) $24x^2 + 38x + 10$ _____



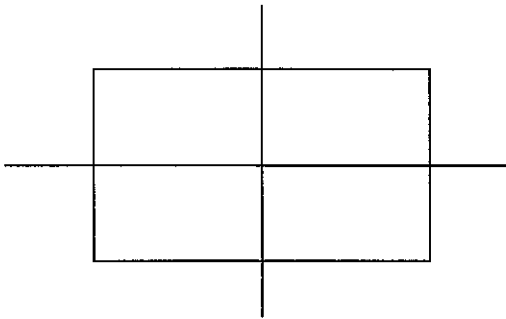
17) $60x^2 - 76x + 24$ _____



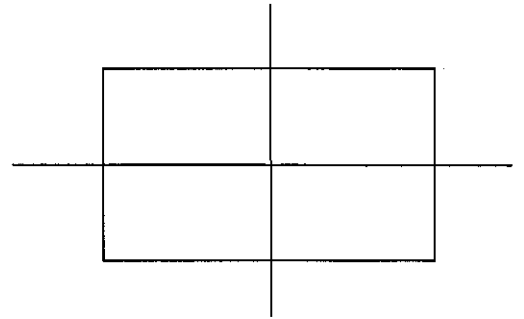
18) $-44x^2 - 102x + 20$ _____



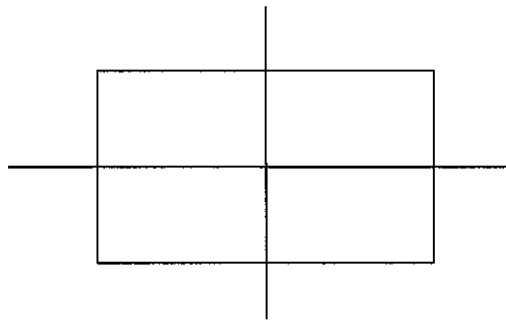
19) $-8x^2 - 65x - 8$ _____



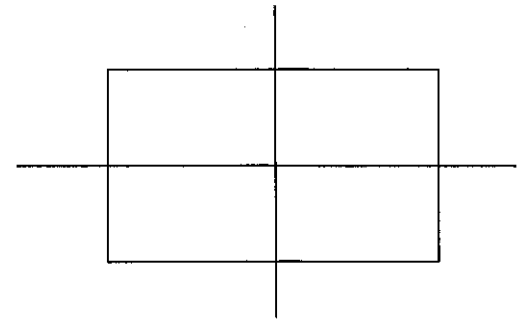
20) $36x^2 - 54x + 8$ _____



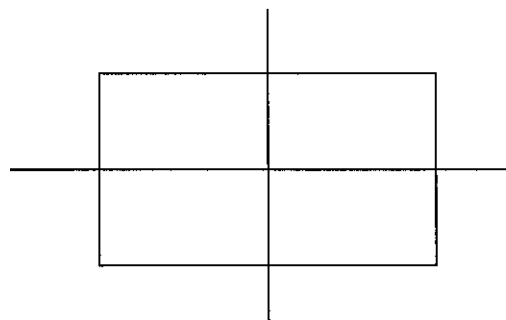
21) $70x^2 + 21x - 28$ _____



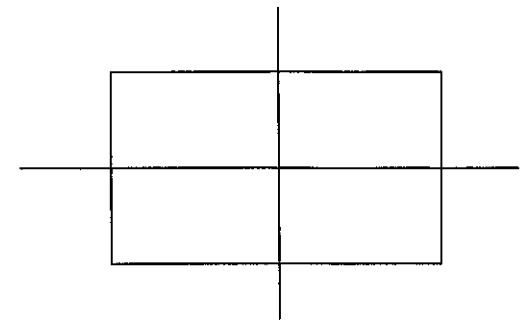
22) $48x^2 - 88x + 32$ _____



23) $45x^2 - 27x - 18$ _____



24) $-12x^2 - 54x - 24$ _____



FACTORING:

Check for GCF!

BINOMIAL

TRINOMIAL

POLYNOMIAL

Difference of 2 Squares:

$$a^2 - b^2 = (a + b)(a - b)$$

Example:

$$4x^2 - 25 = (2x + 5)(2x - 5)$$

Binomial with GCF:

Example:

$$5x^2 + 3x = x(5x + 3)$$

Difference of 2 Squares with GCF:

$$fa^2 - fb^2 = f(a + b)(a - b)$$

Example:

$$4x^2 - 16$$

$$4(x^2 - 4) = 4(x + 2)(x - 2)$$

Box Method:

- Multiply ac (sometimes a is just 1)
- Find factors of ac that sum to b
- Set up box
- Factor out the GCF from each column and row (ALWAYS use the sign that is closest to where you write the GCF!)

Example: $2x^2 - 11x - 6$

a) $2(-6) = -12$

b)

- $-12(1)$ sum is -11

- $-6(2)$ sum is -4

- $-4(3)$ sum is -1

X

-6

2x

1

$$2x^2$$

$$1x$$

$$-12x$$

$$-6$$

$$(x - 6)(2x + 1)$$

Quadratic term	Linear term with one factor from step b)
Linear term with other factor from step b)	Constant term

Box Method:

Place each term in a box and find the GCFs of each column and row.