

**Algebra 1 factoring with gcf worksheet**

**I'm not a robot!**

**Identify the Quadrants**

Plot the following points and identify the quadrant in which they lie:

A (2,-6)

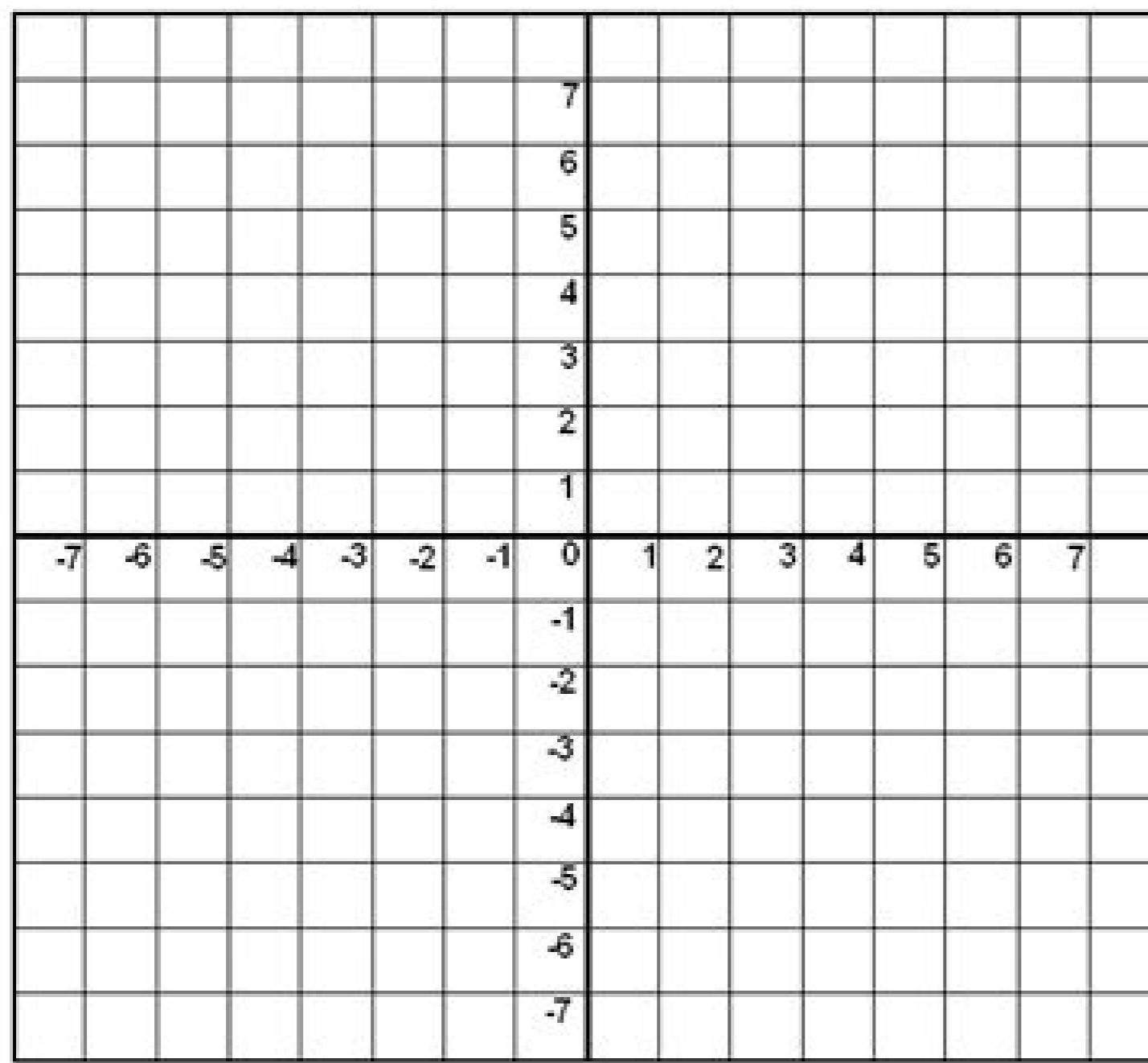
B (-7, -3)

C (-5, 5)

D (-4, -1)

E (1,-1)

G (6, 4)



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**Algebraic Equations!**

**Simplify** the following Equations -

- 1)  $5x + x + 3x - x - 3x =$
- 2)  $5x + y + 3y - y + x =$
- 3)  $2y + 6y - t + 6t + t =$
- 4)  $Y + Y + H + G + D + F + G + W + T + A + T =$
- 5)  $x^2 + 3x^2 + 8n^2 - 5n + x - n^2 =$

**Expand** the following equations –

- 1)  $2(x + 3)$
- 2)  $2(3x - 3)$
- 3)  $(x - 4)(3x + 2)$
- 4)  $3x(x - 4)$

**Factorise** fully these equations –

Eg.  $8x + 16 = 8(x + 2)$  FACTORise a factor is a multiple of a number

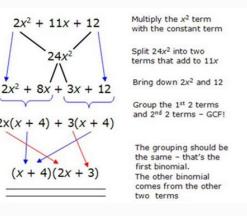
- |               |                         |
|---------------|-------------------------|
| 1) $2x + 8$   | 7) $30x + 60$           |
| 2) $3x + 9$   | 8) $2x^2 + x + 1$       |
| 3) $6x + 9$   | 9) $3t^2 + 3x + 3$      |
| 4) $12x + 18$ | 10) ** $12c^2 + 6c + 3$ |
| 5) $5x + 100$ |                         |
| 6) $7x + 49$  |                         |

**Simplifying Rational Expressions**

$$\frac{2x^2 - 6xy}{4x - 12y} = \frac{2x(x-3y)}{4(x-3y)}$$

$$\frac{2x^2 + 2x - 12}{x^2 + 6x + 9}$$

your work	2. Multiply. Please write your answer in standard form.
$x^3 \cdot x^2$ $y^3$	$(ab^2)(a^2b)$ $a^3b^3$
$(4y^6z)(2y^2z^4)$ $8y^3z^6$	$(ab^2)(5a^2b^3)(3a^3)$ $15a^6b^5$
$\left(\frac{2}{7}a^2\right)(21a^5)$ $6a^7$	$(-a^3b)(-a^2b^2)(-ab^3)$ $-a^6b^6$ (or $-a^6b^6$ )
$ab(a+b)$ $a^2b + ab^2$	$2x^2(2x^2 - 3xy + y^2)$ $4x^4y - 6x^3y^2 + 2x^2y^3$
$\frac{1}{3}x^2(6x^2 - 9xy - 3y^2)$ $2x^4 - 3x^3y - x^2y^2$	$(x+1)(x+5)$ $x^2 + 6x + 5$
$(3a - 2)(a - 3)$ $3a^2 - 2a - 9a + 6$ $(3a^2 - 11a + 6)$	$(3x + 5)(2x - 3)$ $6x^2 - 9x + 10x - 15$ $6x^2 + 1x - 15$
$(3y - 4)(y - 2y^2 + 6)$ $3y^2 - 6y^3 + 18y - 4y + 8y^2 - 24$ $-6y^3 + 11y^2 + 14y - 24$	$(2r - s)(s^2 + 4r^2 - 4rs)$ $2rs^2 + 8r^3 - 8r^2s - s^3 - 4rs^2 + 4r^3$ $6rs^2 + 8r^3 - 1s^3 - 12r^2s$



What is gcf in algebra. Algebra 1 factoring with gcf worksheet answers. How to get the gcf using prime factorization