

## Alg I 9.21 Worksheet

Date \_\_\_\_\_ Period \_\_\_\_\_

**Find each product.**

1)  $(5n + 5)(n - 4)$

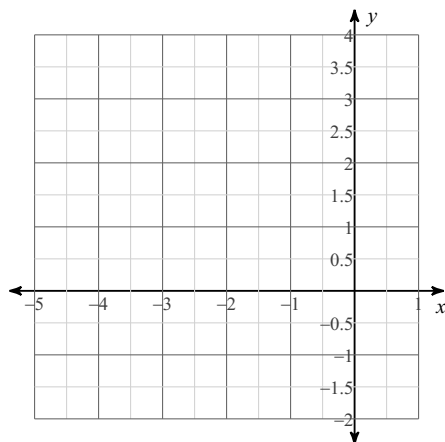
2)  $(5x + 2)(3x + 3)$

3)  $(p + 3)(5p + 4)$

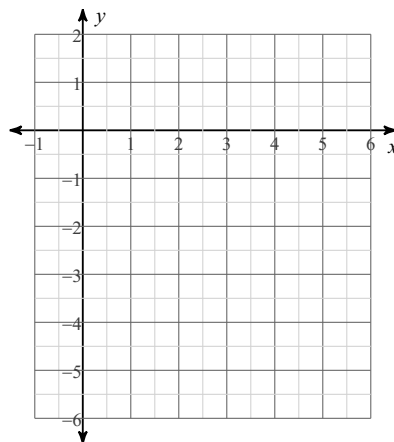
4)  $(4n - 1)(2n - 5)$

**Use the formula to find the axis of symmetry and the vertex of the parabola. Then sketch the graph of the function.**

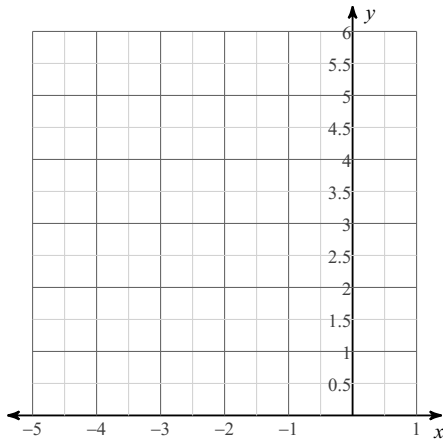
5)  $y = x^2 + 6x + 8$



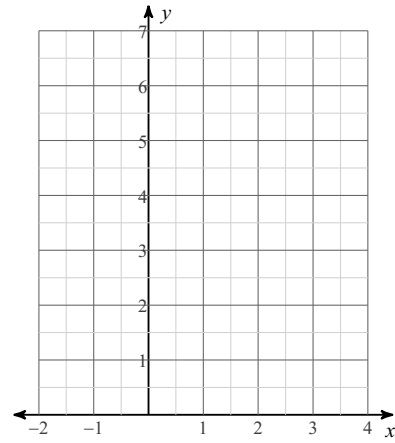
6)  $y = x^2 - 8x + 12$



7)  $y = x^2 + 4x + 5$



8)  $y = x^2 - 4x + 6$



**Find each product.**

9)  $(5m - 7n)(6m + n)$

10)  $(5x - 8y)(8x - 7y)$

**Simplify each expression.**

11)  $(3v^3 - 6v - 3v^2) + (8v^2 + 8v - 4v^4)$

12)  $(7n^4 - 7n^2 - n^3) - (2n^2 - 7n^3 + 8n^4)$

**Factor each completely.**

13)  $b^2 + b - 42$

14)  $r^2 - 2r - 24$

15)  $4n^2 - 8n - 5$

16)  $4x^2 - 25$

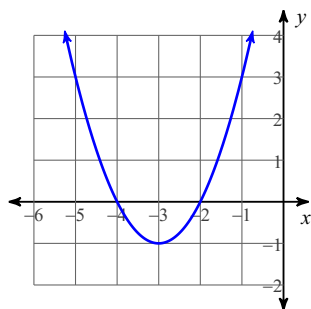
17)  $4r^2 - 7r + 3$

18)  $8x^2 + 10x - 12$

## Answers to Alg I 9.21 Worksheet (ID: 1)

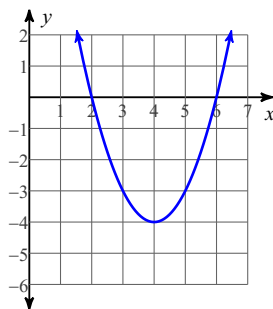
1)  $5n^2 - 15n - 20$

5)



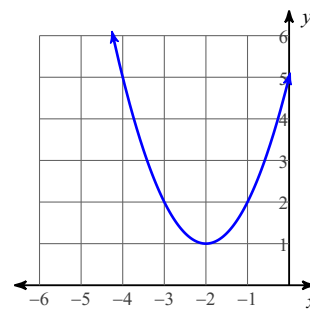
2)  $15x^2 + 21x + 6$

6)



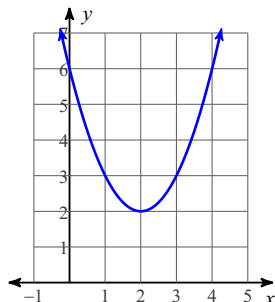
3)  $5p^2 + 19p + 12$

7)



4)  $8n^2 - 22n + 5$

8)



9)  $30m^2 - 37mn - 7n^2$

10)  $40x^2 - 99xy + 56y^2$

11)  $-4v^4 + 3v^3 + 5v^2 + 2v$

12)  $-n^4 + 6n^3 - 9n^2$

13)  $(b - 6)(b + 7)$

14)  $(r + 4)(r - 6)$

15)  $(2n - 5)(2n + 1)$

16)  $(2x + 5)(2x - 5)$

17)  $(r - 1)(4r - 3)$

18)  $2(x + 2)(4x - 3)$