

Algebra Refresh

Date _____ Period _____

Solve each equation.

1) $7 = 5x + 2x$

$$7 = 7x$$

$$1 = x$$

3) $-15 = -3n + 8n$

$$-15 = 5n$$

$$-5 = n$$

5) $6(4 - 6p) = 276$

$$24 - 36p = 276$$

$$-36p = 252$$

$$p = -7$$

7) $-128 = -4(6a + 2)$

$$-128 = -24a - 8$$

$$-120 = -24a$$

$$5 = a$$

9) $147 = 3 + 4(1 - 5x)$

$$147 = 3 + 4 - 20x$$

$$140 = -20x$$

$$-7 = x$$

11) $2(-x - 7) = -x - 6$

$$-2x - 14 = -x - 6$$

$$2 = x$$

Find each product.

13) $(v + 5)^2$

$$(v+5)(v+5)$$

$$v^2 + 10v + 25$$

15) $(x - 8)^2$

$$x^2 - 16x + 64$$

17) $(-2x + 4)^2$

$$4x^2 - 16x + 16$$

2) $-8x + 3 + 3 = -2$

$$-8x + 6 = -2$$

$$-8x = -8$$

$$x = 1$$

4) $102 = -6(1 + 6k)$

$$102 = -6 - 36k$$

$$108 = -36k$$

$$k = -3$$

6) $-7(-6v + 8) = 196$

$$42v - 56 = 196$$

$$42v = 252$$

$$v = 6$$

8) $-6n + 8(5n + 2) = 118$

$$-6n + 40n + 16 = 118$$

$$34n = 102$$

$$n = 3$$

10) $3b + 39 = -3(5b + 5)$

$$3b + 39 = -15b - 15$$

$$18b = -54$$

$$b = -3$$

12) $6x - 3 = -(3 + 5x)$

$$6x - 3 = -3 - 5x$$

$$11x = 0$$

$$x = 0$$

14) $(x + 2)^2$

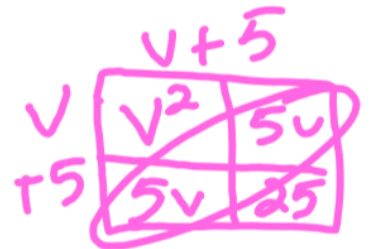
$$x^2 + 4x + 4$$

16) $(-b - 3)^2$

$$b^2 + 6b + 9$$

18) $(4m - 5)^2$

$$16m^2 - 40m + 25$$



Factor each completely.

19) $x^2 - 9x - 10$

$(x-10)(x+1)$

20) $n^2 - 16n + 63$

$(n-9)(n-7)$

21) $2x^2 - 14x - 60$

$2(x-10)(x+3)$

22) $5x^2 + 5x - 100$

$5(x-4)(x+5)$

23) $2b^2 + 23b + 56$

$(2b+7)(b+8)$

24) $2v^2 - 21v + 10$

$(v-10)(2v-1)$

25) $18v^2 - 84v - 480$

$6(3v+10)(v-8)$

26) $15r^2 + 125r + 140$

$(3r+4)(r+7)$

27) $9n^2 - 18n + 8$

$(3n-2)(3n-4)$

28) $10v^2 + 43v + 12$

$(v+4)(10v+3)$

29) $36v^2 + 76v - 96$

$4(v+3)(9v-8)$

30) $60r^2 - 138r + 36$

$6(10r-3)(r-2)$