

$$x^2 + bx + c$$

Name: _____

Date: _____

Learning Goal 1.2Factor trinomials of the form $ax^2 + bx + c$.**Assignment**

1. Multiply each pair of binomials. Sketch and label a rectangle to illustrate each product.

a. $(m + 5)(m + 8)$

b. $(y + 9)(y + 3)$

c. $(w + 2)(w + 16)$

d. $(k + 13)(k + 1)$

e. $(g - 3)(g + 7)$

f. $(h + 2)(h - 7)$

g. $(11 - j)(2 - j)$

h. $(k - 3)(k + 11)$

i. $(12 + h)(7 - h)$

j. $(m - 9)(m + 9)$

k. $(n - 14)(n - 4)$

l. $(p + 6)(p - 17)$

2. Complete the statements.

a. $(w + 3)(w + 2)$
 $= w^2 + [\quad]w + 6$

b. $(x + 5)(x + [\quad])$
 $= x^2 + [\quad]x + 10$

c. $(y + [\quad])(y + [\quad])$
 $= y^2 + 12y + 20$

3. Factor. Check by expanding.

a. $x^2 + 10x + 24$

b. $m^2 + 10m + 16$

c. $p^2 + 13p + 12$

d. $s^2 + 12s + 20$

e. $n^2 + 12n + 11$

f. $h^2 + 8h + 12$

g. $q^2 + 7q + 6$

h. $b^2 + 11b + 18$

i. $b^2 + 19b - 20$

j. $t^2 + 15t - 54$

k. $x^2 + 12x - 28$

l. $n^2 - 5n - 24$

m. $a^2 - a - 20$

n. $y^2 - 2y - 48$

o. $m^2 - 15m + 50$

p. $a^2 - 12a + 36$

q. $12 + 13k + k^2$

r. $-16 - 6g + g^2$

s. $60 + 17y + y^2$

t. $72 - z - z^2$

u. $4y^2 - 20y - 56$

v. $-3m^2 - 18m - 24$

w. $4x^2 + 4x - 48$

x. $10x^2 + 80x + 120$

y. $-5n^2 + 40n - 35$

z. $7c^2 - 35c + 42$