QUESTION **2**   Circle the like terms.

a   3b, 5a, 9a _____

b   4x, 5y, 6x _____

c   9x, 3a, 5x _____

d   9a, 3d, 6a _____

e   8y, 3a, 3y _____

f   3l, 5m, 5l _____

g   3d, 2c, 5c _____

h   9, 8x, 5x _____

i   10y, y, x _____

QUESTION **1**   Collect like terms to simplify the following.

a $a + a + a + a + b + b =$ _____

b $x + x + x + x + y + y + y + y =$ _____

c $c + c + c + c + c + d =$ _____

d $m + n + n + n =$ _____

e $p + p + p + q + q + q =$ _____

f $l + l + l + l + l + l + m + m =$ _____

g $u + u + u + u + u + u + v =$ _____

h $e + e + e + f + f =$ _____

QUESTION **3**   Simplify the following.

a $y + y =$ _____

b $x + x + x + x =$ _____

c $m + m + m + m + m =$ _____

d $a + a + a =$ _____

e $l + l + l + l + l + l =$ _____

f $n + n + n + n =$ _____

g $2d + 3d =$ _____

h $5k + 2k + k =$ _____

i $3a + 7a =$ _____

QUESTION **3**   Simplify the following.

a $2x + 3x =$ _____

b $a + a + a + a =$ _____

c $y + y + y + y + y + y =$ _____

d $y + y + y + y =$ _____

e $m + m + m + m + m =$ _____

f $c + c + c + c =$ _____

g $3d + 9d =$ _____

h $9k + 3k + 7k =$ _____

i $5a + 11a =$ _____

QUESTION **4**   Simplify the following expressions.

a $18x - 3x =$ _____

b $15b - 12b =$ _____

c $24a - 12a =$ _____

d $17a - 7a =$ _____

e $15x - 6x =$ _____

f $12a - 3a =$ _____

g $9m - m =$ _____

h $14p - 2p =$ _____

i $10x - x =$ _____

QUESTION **2**   Simplify the following by collecting like terms.

a $4x + 9 + 2x + 7 =$ _____

b $8a + 9 + 7a + 3 =$ _____

c $5a + 3b + 4a =$ _____

d $5x + 2y + 2x =$ _____

e $7m + 8n + 9m =$ _____

f $2x + 3y + 5x + 8y =$ _____

g $5d + 3a + 9d + 5a =$ _____

h $8x + 15 + 6a + 6 =$ _____

QUESTION **3** Simplify the following.

a $15a - 6a + 9a + b =$ _____

b $8x + 7y - 6x - 3y =$ _____

c $5m + 7n + 8m - 3n =$ _____

d $5p - 3p + 12q - 7q =$ _____

e $9x + 7y - 3x + 2y =$ _____

f $9p - 7p + 8q - 6q =$ _____

g $18x + 35x + 9 =$ _____

h $15abc - 12abc =$ _____

i $14l - 6l + 5m + 18m - 9m =$ _____

j $5x + 8y + 9x - 3y - 2y =$ _____

QUESTION **4** Simplify the following.

a $27xy - 21xy =$ _____

b $18xyz - 12xyz =$ _____

c $18abc - 14abc =$ _____

d $21a + 31b + 41a =$ _____

e $8x^2y + 7x^2y - 2x^2y =$ _____

f $8a^3 + 7a^3 - 3a^3 =$ _____

g $5x^2 + 8x^2 - 2x^2 =$ _____

h $24a^2 + 18b^2 - 12a^2 =$ _____

i $7ab + 9ab + 8abc - 3abc =$ _____

j $5a^2b + 8l + 7a^2b - 3l =$ _____

k $6x^2y^2 + 8y + 4x^2y^2 + 3y =$ _____

l $9a^2b^2 + 6a^2b^2 - 7a^2b^2 + 8ab =$ _____

m $16ab^2 + 8a^2b - 12ab^2 =$ _____

n $15xyz + 4y + 3xyz - 3y =$ _____

QUESTION **6** Collect like terms and simplify.

a $ab + bc - ab - bc + ac =$ _____

b $9a^2b - 5ab^2 - 3ab^2 + 2a^2b =$ _____

c $9x^2 + 10x^2 - 3x^2 =$ _____

d $19xyz + 6y + 4xyz - 5y =$ _____

e $18xyz + 15xyz - 4xy =$ _____

f $36a^2 + 15b^2 - 14a^2 =$ _____

g $8x^2y^2 + 9x + 4x^2y^2 + 6x =$ _____

h $9a^3 + 8a^3 - 3b^3 + 6b^3 =$ _____

7 Simplify these expressions by collecting the like terms.

a $k + 2 + k + 3$

b $7c + 4 + 5c + 1$

c $8p + 3q + p + 7q$

d $8m + 5n + m - 4n$

e $5t + 12 - 2t + 4$

f $8u + 9v - 3u - v$

m $x + y - 4x - 7y$

n $-6a + 2b + 5a + 10b$

o $-5j - 12k + 15j - 4k$

p $x^2 + 6x + 2x^2 + 3x$

q $7a^2 + a^2 + a - 4a$

r $9u - 4u^2 - u^2 + 3u$