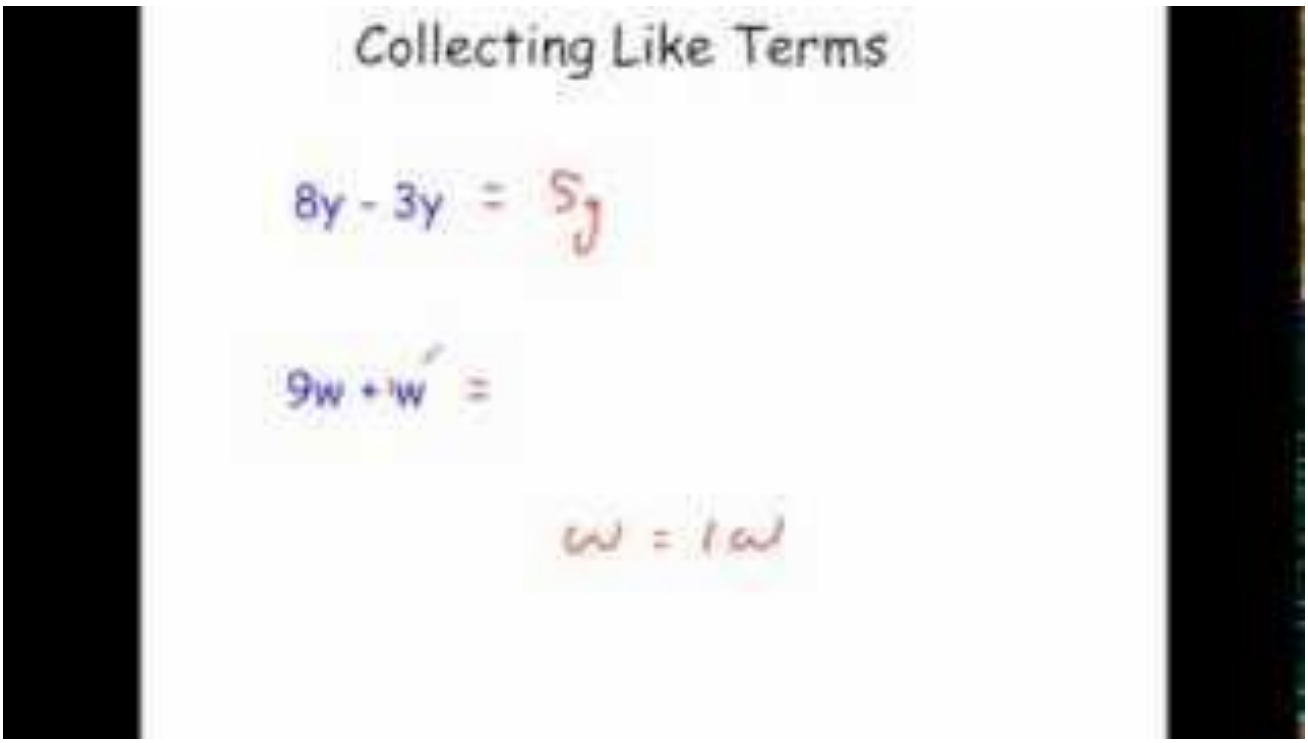
First Lesson

1. Give yourself 5 minutes to complete the starter then martk your own work. Answers are on the last page

Qu 1 44 - 29 = ___	Qu 2 Find 20% of 70?	Qu 3 105 ÷ 5 = ___	Qu 4 Find 30% of 60?
Qu 5 38 + 46 = ___	Qu 6 38 - 27 = ___	Qu 7 1100 x 40 = ___	Qu 8 110 x 900 = ___
Qu 9 90 x 800 = ___	Qu 10 Simplify $^{38}/_{64}$	Qu 11 100 x 80 = ___	Qu 12 Find 30% of 70?

2. Watch this video:



3. Complete the questions below (10 minutes)

Question 1: Simplify each of the following

(a) $y + y + y + y$ (b) $w + w + w + w + w$ (c) $a + a + a + a + a + a$ (d) $s + s + s$

(e) $n + n$ (f) $g + g + g + g - g$ (g) $y + y + y + y - y - y$ (h) $p + p - p -$

(i) $3y + 2y$ (j) $4a + 3a$ (k) $9k + 5k$ (l) $7m + m$

(m) $15c + 20c$ (n) $6w - 3w$ (o) $10y + 3y - 5y$ (p) $20t - 14t$

(q) $7x - 3x - x$ (r) $8k - 8k$ (s) $7y - 2y + y$ (t) $5u - 4u$

(u) $y^2 + y^2$ (v) $a^2 + a^2 + a^2$ (w) $c^2 + c^2 + c^2 + c^2 + c^2$ (x) $7y^2 + 3y^2$

(y) $2w^2 + 4w^2 + 8w^2$ (z) $6y^2 - 2y^2 + 3y^2$

Question 2: Simplify the following expressions

(a) $4u - 6u$ (b) $8w - 9w$ (c) $4a + 2a - 9a$ (d) $2y - 9y$

(e) $-3g - 2g$ (f) $-4f + 9f$ (g) $-m - 7m$ (h) $5y^2 - 7y^2$

(i) $6a^2 + 2a^2 - 9a^2$ (j) $ab + ab + ab$

4. Complete at least 2 of these tasks (1, 2, 3 or 4) (5 minutes)

Simplify these expressions:

$a + a + a$

$2a + 3a$

$7x - 3x$

①

Simplify these expressions:

$3a - 2a + 5a$

$a + b + a + a + b$

$3a + 2b + a + 3b$

②

Simplify:

$4x + 2y - 3x - 5y$

$a - 7 - 4a + 3 + 5a$

$2 + 5n - 4m - 3n + 2m - 5$

③

Simplify:

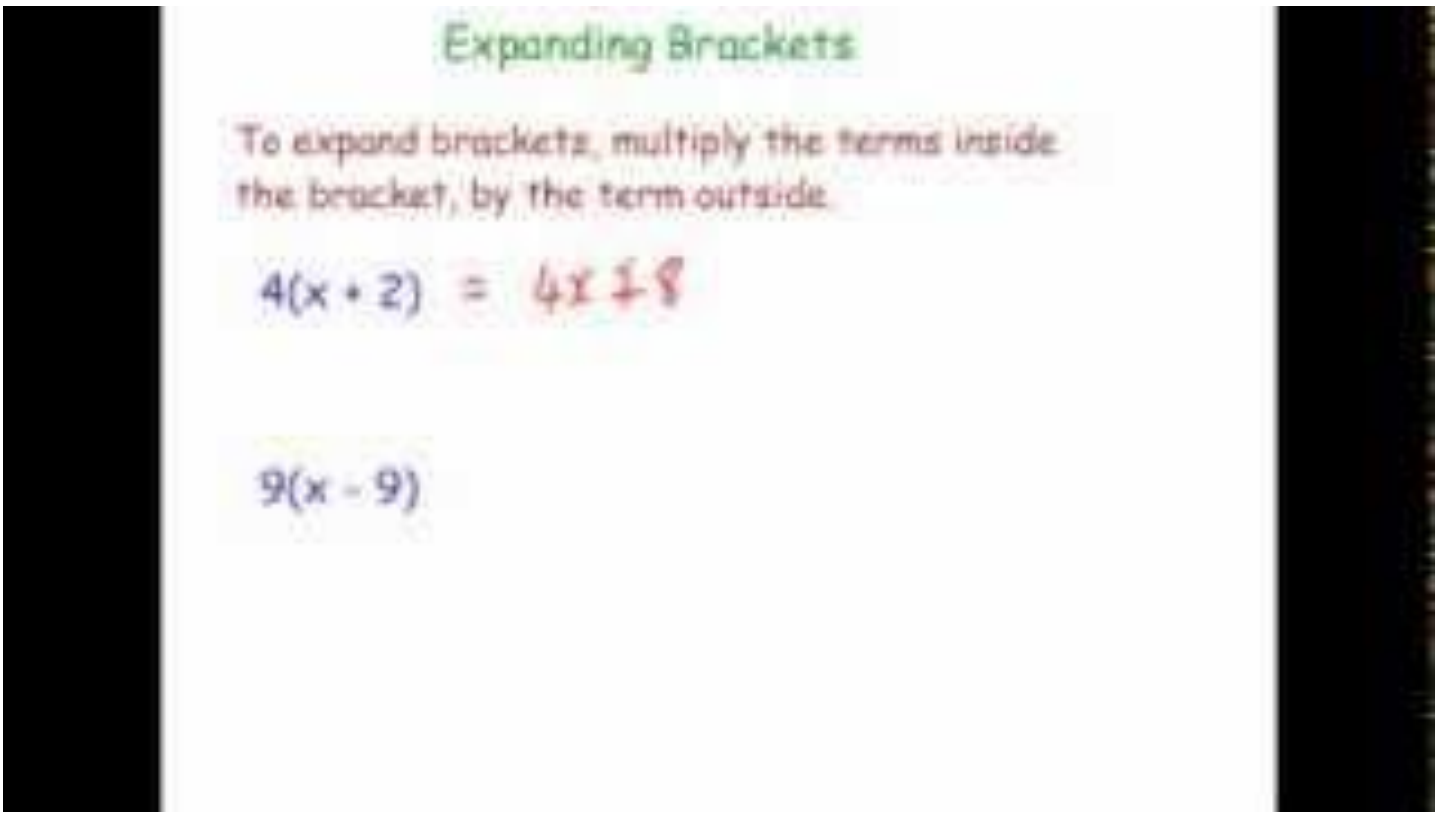
$-4a + 5b - a - 6b + 3a$

$3x + 7w - 2x - 5v + (8v - 5w) - x$

$6e - 5d - (2e - 2d)$

④

5. Watch this video



6. Complete the questions below (10 minutes)

Question 1: Expand the following brackets

(a) $5(y + 3)$	(b) $4(a + 2)$	(c) $8(w + 10)$	(d) $3(x - 7)$
(e) $9(s - 1)$	(f) $2(8 - t)$	(g) $7(4 + h)$	(h) $10(a + 2b + 3c)$
(i) $4(3y + 2)$	(j) $5(2p - 1)$	(k) $3(7a + 2)$	(l) $9(2x - 5)$
(m) $5(4 + 3t)$	(n) $7(9 - 2c)$	(o) $8(3w + 1)$	(p) $9(1 - 4p)$
(q) $11(2k - 5)$	(r) $20(6a + 5c)$	(s) $3(15w - 7)$	(t) $3(9 - 2a)$

Question 2: Expand the following brackets

(a) $-2(w + 5)$	(b) $-3(c + 7)$	(c) $-8(c + 7)$	(d) $-10(y - 2)$
(e) $-7(g - 3)$	(f) $-4(2w + 3)$	(g) $-9(3w - 5)$	(h) $-9(5x - 1)$
(i) $-5(6 - c)$	(j) $-6(4 + 3m)$	(k) $-2(1 + 9c)$	(l) $-5(8a - 7w)$

7. Complete at least 2 of these tasks (1, 2, 3 or 4) (5 minutes)

Expand these brackets:

$2(x+3) =$

$2(4-x) =$

$2(3x+5) =$

①

Simplify these expressions:

$2(4x-3)-3 =$

$2(5x+1)-2(3x) =$

$2(3x-5)-(2x-3) =$

②

Simplify:

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

$2(4x-3)-3(x-3) =$

$2x(5x-3) =$

③

Simplify:

$4(2x-5)-2(3x-4) =$

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

$4(2x-x^2+4)-2(4-3x) =$

④

8. Complete both questions (4 minutes)

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1 Expand and simplify $3(t+4)-2(1-4t)$

.....

(Total for Question 1 is 2 marks)

2 Expand and simplify $3(2z+5)-3(2-4z)$

.....

(Total for Question 2 is 2 marks)

Answers

Qu 1	Qu 2	Qu 3	Qu 4
15	14	21	18
Qu 5	**Qu 6**	**Qu 7**	**Qu 8**
84	11	44000	99000
Qu 9	**Qu 10**	**Qu 11**	**Qu 12**
72000	$^{19}/_{32}$	8000	21

Workout

Question 1

(a) 4y (b) 5w (c) 6a (d) 3s (e) 2n

(f) 3g (g) 2y (h) 0 (i) 5y (j) 7a

(k) 14k (l) 8m (m) 35c (n) 3w (o) 8y

(p) 6t (q) 3x (r) 0 (s) 6y (t) u

(u) $2y^2$ (v) $3a^2$ (w) $5c^2$ (x) $10y^2$ (y) $14w^2$

(z) $7y^2$

Question 2

(a) -2u (b) -w (c) -3a (d) -7y (e) -5g

(f) 5f (g) -8m (h) $-2y^2$ (i) $-a^2$ (j) 3ab

Simplify these expressions:

$a + a + a$ $\boxed{3a}$

$2a + 3a$ $\boxed{5a}$

$7x - 3x$ $\boxed{4x}$

①

Simplify these expressions:

$3a - 2a + 5a$ $\boxed{6a}$

$a + b + a + a + b$ $\boxed{3a + 2b}$

$3a + 2b + a + 3b$ $\boxed{4a + 5b}$

②

Simplify:

$4x + 2y - 3x - 5y$ $\boxed{x - 3y}$

$a - 7 - 4a + 3 + 5a$ $\boxed{2a - 4}$

$2 + 5n - 4m - 3n + 2m - 5$

$\boxed{2n - 2m - 3}$

③

Simplify:

$-4a + 5b - a - 6b + 3a$ $\boxed{-2a - b}$

$3x + 7w - 2x - 5v + (8v - 5w) - x$

$\boxed{3v + 2w}$

$6e - 5d - (2e - 2d)$

$\boxed{4e - 3d}$

④

Workout

Question 1

(a) 4y (b) 5w (c) 6a (d) 3s (e) 2n

(f) 3g (g) 2y (h) 0 (i) 5y (j) 7a

(k) 14k (l) 8m (m) 35c (n) 3w (o) 8y

(p) 6t (q) 3x (r) 0 (s) 6y (t) u

(u) $2y^2$ (v) $3a^2$ (w) $5c^2$ (x) $10y^2$ (y) $14w^2$

(z) $7y^2$

Question 2

(a) -2u (b) -w (c) -3a (d) -7y (e) -5g

(f) 5f (g) -8m (h) $-2y^2$ (i) $-a^2$ (j) 3ab

Expand these brackets:

$2(x+3) =$ $\boxed{2x+6}$

$2(4-x) =$ $\boxed{8-2x}$

$2(3x+5) =$ $\boxed{6x+10}$

①

Simplify these expressions:

$2(4x-3)-3 =$ $\boxed{8x-9}$

$2(5x+1)-2(3x) =$ $\boxed{4x+2}$

$2(3x-5)-(2x-3) =$ $\boxed{4x-7}$

②

Simplify:

$2(4x-3)-3(x+3) =$ $\boxed{5x-15}$

$2(4x-3)-3(x-3) =$ $\boxed{5x+3}$

$2x(5x-3) =$ $\boxed{10x^2-6x}$

③

Simplify:

$4(2x-5)-2(3x-4) =$ $\boxed{2x-12}$

$4x(3x+1)+4(2x-3) =$ $\boxed{12x^2+12x-12}$

$4(2x-x^2+4)-2(4-3x) =$ $\boxed{14x-4x^2+8}$

④

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1 Expand and simplify $3(t+4)-2(1-4t)$

$(3t+12)-(2-8t)$

$(3t+12)-2+8t$

$11t+10$ $11t+10$

(Total for Question 1 is 2 marks)

2 Expand and simplify $3(2z+5)-3(2-4z)$

$(6z+15)-(6-12z)$

$(6z+15)-6+12z$

$18z+9$ $18z+9$

(Total for Question 2 is 2 marks)