Equations with Two Brackets.

Date: **Name:**

Solve each equation below for the given variable. Show all working!

[1] $5(3c - 3) = 5(2c + 5)$	**[2]** $4(5n - 1) = 4(6n - 2)$	**[3]** $2(3c - 3) = 5(5c - 5)$
[4] $4(4c + 4) = 6(3c - 2)$	**[5]** $6(2d + 1) = 5(2d + 2)$	**[6]** $3(3y - 4) = 6(3y - 5)$
[7] $6(5x - 4) = 3(5x + 2)$	**[8]** $2(5q + 2) = 2(6q - 3)$	**[9]** $2(4b - 3) = 2(2b + 3)$
[10] $2(5n + 1) = 2(4n + 5)$	**[11]** $5(5x - 1) = 4(2x + 3)$	**[12]** $4(4g + 4) = 4(5g - 2)$

ANSWERS

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[1]

$5(3c - 3) = 5(2c + 5)$

$15c - 15 = 10c + 25$

$-10c \quad -10c$

$5c - 15 = 25$

$+15 \quad +15$

$\frac{5c}{5} = \frac{40}{5}$

$c = 8$

[2]

$4(5n - 1) = 4(6n - 2)$

$20n - 4 = 24n - 8$

$-20n \quad -20n$

$-4 = 4n - 8$

$+8 \quad +8$

$\frac{4}{4} = \frac{4n}{4}$

$1 = n$

$n = 1$

[3]

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

$6c - 6 = 25c - 25$

$-6c \quad -6c$

$-6 = 19c - 25$

$+25 \quad +25$

$\frac{19}{19} = \frac{19c}{19}$

$1 = c$

$c = 1$

[4]

$4(4c + 4) = 6(3c - 2)$

$16c + 16 = 18c - 12$

$-16c \quad -16c$

$16 = 2c - 12$

$+12 \quad +12$

$\frac{28}{2} = \frac{2c}{2}$

$14 = c$

$c = 14$

[5]

$6(2d + 1) = 5(2d + 2)$

$12d + 6 = 10d + 10$

$-10d \quad -10d$

$\frac{2d + 6}{6} = \frac{10}{6}$

$\frac{2d}{2} = \frac{4}{2}$

$d = 2$

[6]

$3(3y - 4) = 6(3y - 5)$

$\frac{9y}{-9y} - 12 = 18y - 30$

$-9y \quad -9y$

$-12 = 9y - 30$

$+30 \quad +30$

$\frac{18}{9} = \frac{9y}{9}$

$2 = y$

$y = 2$

[7]

$6(5x - 4) = 3(5x + 2)$

$30x - 24 = 15x + 6$

$-15x \quad -15x$

$15x - 24 = 6$

$+24 \quad +24$

$\frac{15x}{15} = \frac{30}{15}$

$x = 2$

[8]

$2(5q + 2) = 2(6q - 3)$

$10q + 4 = 12q - 6$

$-10q \quad -10q$

$4 = 2q - 6$

$+6 \quad +6$

$\frac{10}{2} = \frac{2q}{2}$

$5 = q$

$q = 5$

[9]

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

$8b - 6 = 4b + 6$

$-4b \quad -4b$

$4b - 6 = 6$

$+6 \quad +6$

$\frac{4b}{4} = \frac{12}{4}$

$b = 3$

[10]

$2(5n + 1) = 2(4n + 5)$

$10n + 2 = 8n + 10$

$-8n \quad -8n$

$2n + 2 = 10$

$-2 \quad -2$

$\frac{2n}{2} = \frac{8}{2}$

$n = 4$

[11]

$5(5x - 1) = 4(2x + 3)$

$25x - 5 = 8x + 12$

$-8x \quad -8x$

$17x - 5 = 12$

$+5 \quad +5$

$\frac{17x}{17} = \frac{17}{17}$

$x = 1$

[12]

$4(4g + 4) = 4(5g - 2)$

$16g + 16 = 20g - 8$

$-16g \quad -16g$

$16 = 4g - 8$

$+8 \quad +8$

$\frac{24}{4} = \frac{4g}{4}$

$6 = g$

$g = 6$