Equations with Brackets. **Date:** **Name:**

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

[1] $4(x + 3) = 36$	**[2]** $2(x + 4) = 16$	**[3]** $3(3 + 5y) = 84$
[4] $4(3y + 10) = 148$	**[5]** $4(-3y - 8) = -128$	**[6]** $5(-3y - 10) = -185$
[7] $-3(-9y - 3) = 90$	**[8]** $-8(-y - 9) = 144$	**[9]** $-6(4 + 9y) = -510$
[10] $-2(-4y + 5) = 30$	**[11]** $-2(2y - 3) = -6$	**[12]** $-5(y - 7) = 0$

ANSWERS:

Equations with Brackets. Date: Name:

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

[1]

$4(x + 3) = 36$

$4x + 12 = 36$

$-12 \quad -12$

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

$x = 6$

[2]

$2(x + 4) = 16$

$2x + 8 = 16$

$-8 \quad -8$

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

$x = 4$

[3]

$3(3 + 5y) = 84$

$9 + 15y = 84$

$-9 \quad -9$

$\frac{15y}{15} = \frac{75}{15}$

$y = 5$

[4]

$4(3y + 10) = 148$

$12y + 40 = 148$

$-40 \quad -40$

$\frac{12y}{12} = \frac{108}{12}$

$y = 9$

[5]

$4(-3y - 8) = -128$

$-12y - 32 = -128$

$+32 \quad +32$

$\frac{-12y}{-12} = \frac{-96}{-12}$

$y = 8$

[6]

$5(-3y - 10) = -185$

$-15y - 50 = -185$

$+50 \quad +50$

$\frac{-15y}{-15} = \frac{-135}{-15}$

$y = 9$

[7]

$-3(-9y - 3) = 90$

$27y + 9 = 90$

$-9 \quad -9$

$\frac{27y}{27} = \frac{81}{27}$

$y = 3$

[8]

$-8(-y - 9) = 144$

$8y + 72 = 144$

$-72 \quad -72$

$\frac{8y}{8} = \frac{72}{8}$

$y = 9$

[9]

$-6(4 + 9y) = -510$

$-24 + -54y = -510$

$+24 \quad +24$

$\frac{-54y}{-54} = \frac{-486}{-54}$

$y = 9$

[10]

$-2(-4y + 5) = 30$

$8y - 10 = 30$

$+10 \quad +10$

$\frac{8y}{8} = \frac{40}{8}$

$y = 5$

[11]

$-2(2y - 3) = -6$

$-4y + 6 = -6$

$-6 \quad -6$

$\frac{-4y}{-4} = \frac{-12}{-4}$

$y = 3$

[12]

$-5(y - 7) = 0$

$-5y + 35 = 0$

$-35 \quad -35$

$\frac{-5y}{-5} = \frac{-35}{-5}$

$y = 7$