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HW: Perimeter & Consecutive Integers

1.) P = 80, width = x, length = x + 8

$P = 2L + 2W$

$80 = 2(x+8) + 2x$

$80 = 2x + 16 + 2x$

$80 = 4x + 16$

$-16 \quad -16$

$\frac{64}{4} = \frac{4x}{4}$

$16 = x$

16 + 8 = 24

width = 16 in

length = 24 in

2.) Parking lot, P = 146, width = x, length = 4x − 7

$P = 2L + 2W$

$146 = 2(4x-7) + 2x$

$146 = 8x - 14 + 2x$

$146 = 10x - 14$

$+14 \quad +14$

$\frac{160}{10} = \frac{10x}{10}$

$16 = x$

4(16) − 7 = 57

width = 16 yd

length = 57 yd

3) old rect, length = 2x, width = x

new, P = 198, width = x − 1, length = 2x + 4

$P = 2L + 2W$

$198 = 2(2x+4) + 2(x-1)$

$198 = 4x + 8 + 2x - 2$

$198 = 6x + 6$

$-6 \quad -6$

$\frac{192}{6} = \frac{6x}{6}$

$32 = x$

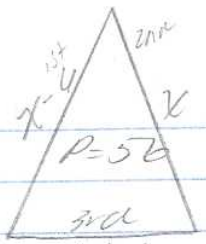
2(32) = 64

orig.

width = 32 in

length = 64 in

10/4

4.) 

P = add up 3 sides

$56 = x + x - 4 + 2x - 14$

$56 = 4x - 20$

$+20 \quad +20$

$\frac{76}{4} = \frac{4x}{4}$

$19 = x$

2nd side $= 2(x-4) - 2$

$2x - 8 - 2$

3rd side $\rightarrow 2x - 14$

1st side $= 19 - 4 = 13$ cm

2nd side $= 19$ cm

3rd side $= 2(19) - 14 = 24$ cm

6.) Let 1st CI $= x = -8$ ans

2nd CI $= x + 1 = -7$

$x + 1 = 2x + 9$

$-x \quad -x$

$1 = x + 9$

$-9 \quad -9$

$-8 = x$

7.) Let 1st CEI $= x = 10$ ans

2nd CEI $= x + 2 = 12$

3rd CEI $= x + 4 = 14$

$2x + 3(x+4) = 4(x+2) + 14$

$2x + 3x + 12 = 4x + 8 + 14$

$5x + 12 = 4x + 22$

$-4x \quad -4x$

$x + 12 = 22$

$-12 \quad -12$

$x = 10$

8.) Let 1st bro $= x = 13$ ans

2nd bro $= x + 2 = 15$

oldest 3rd bro $= x + 4 = 17$

oldest − difference

$(x+4) - 2x = (x+2) - 24$

$-1x + 4 = 1x - 22$

$-1x \quad -1x$

$-2x + 4 = -22$

$-4 \quad -4$

$\frac{-2x}{-2} = \frac{-26}{-2}$

$x = 13$