Chapter 2 Test Review B

(1) Find all sets of 3 consecutive integers

$102 < x+(x+1)+(x+2) < 116$

$102 < 3x+3 < 116$

$-3 \quad -3 \quad -3$

$99 < 3x < 113$

$\frac{99}{3} < \frac{3x}{3} < \frac{113}{3}$

$33 < x < 37.\overline{6}$

x can be 34, 35, 36, or 37

{34, 35, 36}
{35, 36, 37}
{36, 37, 38}
{37, 38, 39}

(2) test 1 - 86 test 2 - x+8 test 3 - x

What are the possible scores for test 3?

$80 \leq \frac{86+x+8+x}{3} \leq 84$

$\times 3 \quad \times 3 \quad \times 3$

$240 \leq 86+8+x+x \leq 252$

$240 \leq 2x+94 \leq 252$

$-94 \quad -94 \quad -94$

$146 \leq 2x \leq 158$

$73 \leq x \leq 79$

Test 3 can be between 73% and 79%.

③ at least 5 bucks

$q = q$ $\quad n = 2q$ $\quad d = n + 5$ $\quad$ How many quarters?

$d = 2q + 5$

$$.25q + .05(2q) + .10(2q+5) \geq 5$$
$$25q + 5(2q) + 10(2q+5) \geq 500$$
$$25q + 10q + 20q + 50 \geq 500$$
$$55q + 50 \geq 500$$
$$55q \geq 450$$
$$q \geq 8.\overline{18} \rightarrow 9q$$

There are at least 9 quarters in the pile.

④ $W = \frac{1}{2}D + 3$ $\quad$ diff = less than 4 years

What is the oldest Dinky can be?

$\frac{1}{2}D + 3 - D < 4$

$-3 \quad -3$

$\frac{1}{2}D - D < 1$

$D - 4 > \frac{1}{2}D + 3$

$+4 \quad +4$

$D > \frac{1}{2}D + 7$

$-\frac{1}{2}D \quad -\frac{1}{2}D$

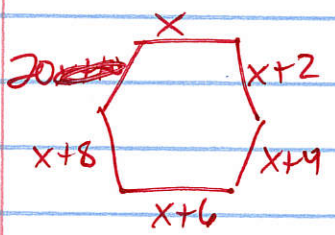
$\frac{1}{2}D > 7$

$D > 14$

Dinky is no more than 14 years old.

OR The oldest she can be is 13 years old.

⑤



consecutive odd integers
p = between 62 & 84 cm
What are the possible lengths of the other sides?

$62 < x + x+2 + x+4 + x+6 + x+8 + 20 < 84$

$62 < 5x + 40 < 84$

$-40 \quad -40 \quad -40$

$22 < 5x < 44$

$4.4 < x < 8.8$

odds only!

$x = 5, ~~6~~, 7, ~~8~~$

{5, 7, 9, 11, 13} OR {7, 9, 11, 13, 15}