After having read this chapter pencil in hand and done this REALITY CHECK

i. What would you say the idea of this chapter is:

ii. What question(s) do you have about this chapter:
**Hw 4-1.** Given the real-world situation in which Jack has $\text{money}$ and Jill has $\text{money}$, circle ALL of the following comparison sentences that can be truly written on paper about it?

- $\text{Jack} > \text{Jill}$
- $\text{Jack} \geq \text{Jill}$
- $\text{Jack} = \text{Jill}$
- $\text{Jack} < \text{Jill}$
- $\text{Jack} \leq \text{Jill}$
- $\text{Jack} \neq \text{Jill}$

**Your Work:**

i. Explain your reasoning in getting your result.

ii. Circle which of the following choices matches exactly what you got above.

   a. $\text{Jack} < \text{Jill}$, $\text{Jack} \leq \text{Jill}$
   b. $\text{Jack} < \text{Jill}$
   c. $\text{Jack} < \text{Jill}$, $\text{Jack} \leq \text{Jill}$, $\text{Jack} \neq \text{Jill}$
   d. $\text{Jack} \neq \text{Jill}$
   e. None of the above four choices

iii. Check on the front page the box that corresponds to your choice thus $\Box$.

**Hw 4-2.** Circle ALL the comparison sentences that are FALSE.

- $4 \text{ Dollars} > 4 \text{ Dollars}$
- $4 \text{ Dollars} \geq 4 \text{ Dollars}$
- $4 \text{ Dollars} = 4 \text{ Dollars}$
- $4 \text{ Dollars} < 4 \text{ Dollars}$
- $4 \text{ Dollars} \leq 4 \text{ Dollars}$
- $4 \text{ Dollars} \neq 4 \text{ Dollars}$

**Your Work:**

i. Explain your reasoning in getting your result.
ii. Circle which of the following choices matches exactly what you got above.

   a. 4 Dollars = 4 Dollars
   b. 4 Dollars ≤ 4 Dollars, 4 Dollars ≥ 4 Dollars
   c. 4 Dollars ≤ 4 Dollars, 4 Dollars ≥ 4 Dollars
   d. 4 Dollars < 4 Dollars, 4 Dollars > 4 Dollars, 4 Dollars ≠ 4 Dollars
   e. None of the above four choices

iii. Check on the front page the box that corresponds to your choice thus ☒.

**HW 4-3.** All we know about Mary’s collection and Larry’s collection is that

   Mary < Larry

Circle ALL of the following comparison sentences that are TRUE.

   Larry > Mary       Larry ≥ Mary    Larry = Mary
   Larry < Mary       Larry ≤ Mary    Larry ≠ Mary

**Your Work:**

i. Explain your reasoning in getting your result.

ii. Circle which of the following choices matches exactly what you got above.

   a. Larry ≥ Mary, Larry > Mary
   b. Larry ≥ Mary
   c. Larry > Mary
   d. Larry > Mary, Larry ≥ Mary, Larry ≠ Mary
   e. None of the above four choices
iii. Check on the front page the box that corresponds to your choice thus X.

_Hw 4-4._ All we know about Barry’s collection and Jenny’s collection is that

\[ Barry \leq Jenny \]

Circle ALL of the following comparison sentences that are TRUE.

- Jenny > Barry
- Jenny \geq Barry
- Jenny = Barry
- Jenny < Barry
- Jenny \leq Barry
- Jenny \neq Barry

**Your Work:**

i. Explain your reasoning in getting your result.

ii. Circle which of the following choices matches exactly what you got above.

a. Jenny \geq Barry, Jenny > Barry
b. Jenny \neq Barry
c. Jenny > Barry
d. Jenny \geq Barry
e. None of the above four choices

iii. Check on the front page the box that corresponds to your choice thus X.

_Hw 4-5._ All we know about Cindy’s collection and Teddy’s collection is that

\[ Cindy = Teddy \]

Circle ALL of the following comparison sentences that are TRUE.

- Teddy > Cindy
- Teddy \geq Cindy
- Teddy = Cindy
- Teddy < Cindy
- Teddy \leq Cindy
- Teddy \neq Cindy
Your Work:

i. Explain your reasoning in getting your result.

ii. Circle which of the following choices matches exactly what you got above.

a. Teddy $\geq$ Cindy
b. Teddy $\leq$ Cindy
c. Teddy $\geq$ Cindy, Teddy $\leq$ Cindy, Teddy = Cindy
d. Teddy $\geq$ Cindy, Teddy $\leq$ Cindy
e. None of the above four choices

iii. Check on the front page the box that corresponds to your choice thus $\times$.

**Hw 4-6.** All we know about Billy’s collection and Lizzy’s collection is that

Billy $\neq$ Lizzy

Circle ALL of the following comparison sentences that are TRUE.

Lizzy $>$ Billy    Lizzy $\geq$ Billy    Lizzy = Billy
Lizzy $<$ Billy    Lizzy $\leq$ Billy    Lizzy $\neq$ Billy

Your Work:

i. Explain your reasoning in getting your result.

ii. Circle which of the following choices matches exactly what you got above.
a. Lizzy > Billy
b. Lizzy < Billy
c. Lizzy ≥ Billy
d. Lizzy ≤ Billy
e. None of the above four choices

iii. Check on the front page the box that corresponds to your choice thus [X].

**Hw 4-7.** Given the data set

0 Dollars, 1 Dollars, 2 Dollars, 3 Dollars

and the formula in Dollars

\[ x < 2 \]

What are the solutions in Dollars?

**Your Work:**

i. Explain your reasoning in getting your result.

ii. Circle which of the following choices matches exactly what you got above.

a. 0, 1, 2  
   b. 2, 3  
   c. 0, 1, 2, 3  
   d. 1  

   e. None of the above four choices

iii. Check on the front page the box that corresponds to your choice thus [X].

**Hw 4-8.** Given the data set

0 Dollars, 1 Dollars, 2 Dollars, 3 Dollars

and the formula in Dollars

\[ x \leq 2 \]
What are the solutions in Dollars?

**Your Work:**

i. Explain your reasoning in getting your result.

ii. Circle which of the following choices matches exactly what you got above.

   a. 0, 1, 2
   b. 2, 3
   c. 0, 1
   d. 3
   e. None of the above four choices

iii. Check on the front page the box that corresponds to your choice thus X.

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_Hw 4-9._ Given the data set

0 Dollars, 1 Dollars, 2 Dollars, 3 Dollars, 4 Dollars

and the formula in Dollars

\[ x \geq 2 \]

What are the solutions in Dollars?

**Your Work:**

i. Explain your reasoning in getting your result.

ii. Circle which of the following choices matches exactly what you got above.

   a. 0, 1, 2
   b. 2, 3
   c. 0, 4
   d. 2, 3, 4
   e. None of the above four choices

iii. Check on the front page the box that corresponds to your choice thus X.
Hw 4-10. Given the data set

0 Dollars, 1 Dollars, 2 Dollars, 3 Dollars, 4 Dollars, 5 Dollars

and the formula in Dollars

\[x = 2\]

What are the solutions in Dollars?

**Your Work:**

i. Explain your reasoning in getting your result.

ii. Circle which of the following choices matches exactly what you got above.

   a. 0, 1, 2  
   b. 2, 3  
   c. 0, 5  
   d. 3, 4, 5  
   e. None of the above four choices

iii. Check on the front page the box that corresponds to your choice thus [X].

Hw 4-11. Given the data set

0 Dollars, 1 Dollars, 2 Dollars, 3 Dollars, 4 Dollars, 5 Dollars, 6 Dollars

and the formula

\[x \neq 2\]

What are the solutions?

**Your Work:**

i. Explain your reasoning in getting your result.
ii. Circle which of the following choices matches exactly what you got above.

   a. 0, 1, 3, 4, 5, 6   b. 2, 3, 4, 5   c. 0, 1   d. 2
   e. None of the above four choices

iii. Check on the front page the box that corresponds to your choice thus [X].

**Homework 4-12.** Given the data set

0 Dollars, 1 Dollars, 2 Dollars, 3 Dollars, 4 Dollars, 5 Dollars, 6 Dollars

and the formula in Dollars

\[ x \neq 2 \]

What are the solutions in Dollars?

**Your Work:**

i. Explain your reasoning in getting your result.

ii. Circle which of the following choices matches exactly what you got above.

   a. 0, 1, 2   b. 2, 3, 4, 5, 6   c. 0, 1   d. 3
   e. None of the above four choices

iii. Check on the front page the box that corresponds to your choice thus [X].