WORKSHEET 08B – Due on week 4 day 3

1	**Reading/studying C. 8.1-8.4** • Textbook • Slides • Chapter Summary (at the end of the chapter lessons) Keep your notes .
2	**Self-Check questions** • Answer the questions as you come across them during your reading, using pencil. • Check the answers & correct (if necessary) with non-red pen. Write down the answers. Check solutions, noting mistakes to learn from (if any). Hand in your work. .

3	Copy the second set of 3 .java files from WS 08A, rename them (i.e., do NOT type over the previous files):
	• **CoinATDP → Coin**
	• **CashRegisterATDP → CashRegister3**
	• **CashRegisterTesterATDP → CashRegisterTester**
	and enhance as follows:
	a) keep an array of 5 Coins in **CashRegister3**
	▪ decide the field name, say, **coinArr – Hint:**
	private Coin[] coinArr = new Coin[5];
	▪ initialize it in the constructor – see the code in **CashRegisterTesterATDP**
	▪ keep the dollar coin in index 0, quarter in index 1, etc.
	b) replace the **giveChange** method in **CashRegister3**:
	int[] giveChange()
	which returns an array of 5 integers, which of which is the number of coins for the change – calculate these counts by using the coin values in **coinArr**; you ***MUST*** use **coinArr** (which is the purpose of **coinArr'**s existence, and the objective of the lesson)
	c) call this new **giveChange** method in **CashRegisterTester**, and display the info that looks similar to the following:
	`Change:`
	`2 dollars`
	`3 quarters`
	`0 dimes`
	`4 nickels`
	`1 pennies`

4	Practice Exercise **E8.6** – ***Hint***: write one class containing static methods, and the main program.
	(cont. next page)

5	Practice Exercise **E8.7** – It is more advisable to write a separate class to represent a concept (rather than writing a group of static methods for one or many concepts, as in E8.6). So, for this exercise, write:
	• 4 classes (one for each solid), and
	  ○ Each class has the appropriate fields for dimensions: **height** for **Cube**, **radius** for **Sphere**, both **height** & **radius** for **Cylinder** and **Cone**
	  ○ Each class has a constructor
	  ○ Each class 2 methods (where you can imitate the code from the static methods in E8.6
	  ▪ **double getVolume()**
	  ▪ **double getSurface()**
	• 1 class containing the main program (as a Tester)

6	**Submit code online**
7	**Share in online Discussion** Reminder: When sharing, share something that is a **learning opportunity** to your classmates. Do not simply report your status.

THE END