Part One:

1.) The spreadsheet is nice and all, and provides valuable information regarding the company but is obeying so many laws that my eyes want to bleed out. First off, the data is disobeying 1NF, because the values are not atomic. Atomic means that the values within the slot cannot be broken down into more primitive values. There is also a lot of data duplication within the spreadsheet, which can lead to confusion and is poor data management.

2.)

PackageID	TagNumber	InstallDate	SoftwareCostUSD
AC01	32808	09-13-2005	754.95
DB32	32808	12-03-2005	380.00
DB32	37691	06-15-2005	380.00
DB33	57772	05-27-2005	412.77
WP08	32808	01-12-2006	185.000
WP08	37691	06-15-2005	227.50
WP08	57222	05-27-2005	170.24
WP09	59836	10-30-2005	35.00
WP09	77740	05-27-2005	35.00

3.) The primary key for this is both the PackageID and TagNumber together since the PackageID alone is repeated in the same column. This type of primary key is also known as a composite key.

Part Two:

4.)

PackageID	TagNumber	InstallDate	SoftwareCostUSD	ComputerModel	SoftwarePackageName
AC01	32808	09-13-2005	754.95	IBM	Zork
DB32	32808	12-03-2005	380.00	IBM	LINUX
DB32	37691	06-15-2005	380.00	Apple	LINUX
DB33	57772	05-27-2005	412.77	Lenova	CODD
WP08	32808	01-12-2006	185.000	IBM	Trunks
WP08	37691	06-15-2005	227.50	Computer1	Trunks
WP08	57222	05-27-2005	170.24	Gateway	Trunks
WP09	59836	10-30-2005	35.00	HP	MacOS
WP09	77740	05-27-2005	35.00	MSI	MacOS

5.) PackageID → SoftwarePackageName
TagNumber → ComputerModel
InstallDate, SoftwareCostUSD → PackageID, TagNumber

6.) This table does not fit the third normal form standards. In order to fit the third normal form, the table must follow the second normal form, as well as have no multi-key dependencies. In second normal form, the data must follow first normal form and have no partial key dependencies. The data in this table does not actually even have one primary key, since PackageID and TagNumber are both duplicated. Along with having partial and multiple key dependencies within this table, there are values within the table that are not able to be determined through the candidate key alone. It is actually apparent that the components of the unique candidate key of each row are actually dependent on some of the non-key attributes.

Part Three:

7 and 8.)

Primary Keys:
PackageID

Software: SoftwarePackageName is dependent on PackageID

PackageID (primary key)	**SoftwarePackageName (dependent on primary key)**
AC01	Zork
DB32	LINUX
DB33	CODD
WP08	Trunks
WP09	MacOS

Computers: ComputerModel is dependent on TagNumber

TagNumber (primary key)	**ComputerModel**
32808	IBM
37691	Apple
57772	Lenova
37691	Computer1
57222	Gateway
59836	HP
77740	MSI

Installation Stuff: InstallDate and SoftwareCostUSD are dependent on PackageID and TagNumber

Combined, PackageID and TagNumber are the primary candidate key.

PackageID (primary key)	TagNumber (primary key)	InstallDate	SoftwareCostUSD
AC01	32808	09-13-2005	754.95
DB32	32808	12-03-2005	380.00
DB32	37691	06-15-2005	380.00
DB33	57772	05-27-2005	412.77
WP08	32808	01-12-2006	185.000
WP08	37691	06-15-2005	227.50
WP08	57222	05-27-2005	170.24
WP09	59836	10-30-2005	35.00
WP09	77740	05-27-2005	35.00

9.) The tables are now in third normal form because the tables are now in 2nd normal form and they do not have transitive dependencies among the key attributes. The non primary key attributes are fully dependent on solely the primary keys and nothing else. As an example, let's look at the computer table. All of the ComputerModel's are only dependent on the TagNumber, and that is it. Same goes for the other two tables. In InstallationStuff, InstallDate and SoftwareCostUSD are fully dependent on PackageID and TagNumber.

10.)