1. Using R, compute the correlation between the five variables in Exhibit 4 and sale price.

**Correlation between year built and price:**   
Formula in Excel: *=CORREL(Table1[Sale Price ($US millions)],Table1[Year Built])*

**0.808302951**

This indicates a notable positive correlation between price and year built, if year of build increases, the price also increases.

**Correlation between price and age at sales:**   
Formula in Excel: *=CORREL(Table1[Sale Price ($US millions)],Table1[Age of sale (years)])*

**-0.787490754**

This indicates a notable negative correlation between price and age at sale, hence as age of ship increases the price decreases.

**Correlation between price and Dead Weight:**

Formula in Excel: *=CORREL(Table1[Sale Price ($US millions)],Table1[Dead-Weight Tons (000)])*

**0.514805345**

This indicates a notable positive correlation between price and DWT, if DWT increases, the price also increases.

**Correlation between price and Capesize:**

Formula in Excel: *=CORREL(Table1[Sale Price ($US millions)],Table1[Trailling 1- year Average monthly baltic Dry Cape size Index])*

**0.352347561**

This indicates a notable positive correlation between price and capesize, if capesize increases, the price also increases.

1. Using R, compute the means and standard deviations of all six variables.

**Mean**

**Price**   
Formula*:  =AVERAGE(Table1[Sale Price ($US millions)])*

Min price of a ship is:  22

Max Price of a ship is: 158

Mean Price of all the ships is: 72.95625

**Year Built of the ship**   
Formula*: =AVERAGE(Table1[Year Built])*

Earliest ship built in the year: 1989

Latest ship built in the year: 2004

Mean value of Year built of each ship is: 1992.916667

**Age at sale of the ship**   
Formula*: =AVERAGE(Table1[Age of sale (years)])*  
Max Age at sale from all the ships: 3

Min age at sale from all the ships: 26

Mean value of age at sale of all ships is: 14.270833 years

**Dead weight of ships**

Formula*: =AVERAGE(Table1[Dead-Weight Tons (000)])*

Max dead weight of any ship: 98.4

Min dead weight of any ship: 207.1

Mean value of dead weight of all ships is: 158.93541 tons

**Capesize**    
Formula*: =AVERAGE(Table1[Trailling 1- year Average monthly baltic Dry Cape size Index])*

Min value of a capesize is: 4647

Max value of capesize is: 12479

Mean value of cape size is: 7643.7083

**Standard Deviation**   
**Price**

Formula: *=STDEV.S(Table1[Sale Price ($US millions)])*Standard Deviation of Price: 33.89537

**Year Built**   
Formula: *=STDEV.S(Table1[Year Built])*  
Standard Deviation of year built is: 6.330719

**Age at sale**   
Formula: *=STDEV.S(Table1[Age of sale (years)])*   
Standard Deviation of Age at sale is 6.330404

**Dead Weight**   
Formula: *=STDEV.S(Table1[Dead-Weight Tons (000)])*Standard Deviation of Dead weights is: 17.65098

**Capesize**   
Formula: *=STDEV.S(Table1[Trailling 1- year Average monthly baltic Dry Cape size Index])*  
Standard Deviation of Capesize is 2499.30936