Chapter Questions: 1,2,5,6

1. Entered index wasn’t an integer

2. Aaron Rodgers

5. The program wont work and will show the error message.

6. NumberFormatException, IllegalArgumentException, RuntimeException, Exception, IOException

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\* ChildHeightEstimatorDriver.Java

\* <Adam Cox>

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\* This is the driver for ChildHeightEstimator

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**public** **class** ChildHeightEstimatorDriver

{

**public** **static** **void** main(String[] args)

{

ChildHeightEstimator childHeight; // a child's height-calculation data

childHeight = **new** ChildHeightEstimator();

childHeight.promptForGender();

childHeight.promptForMotherHeight();

childHeight.promptForFatherHeight();

childHeight.displayChildHeight();

} // end main

} // end of ChildHeightEstimator

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\* ChildHeightEstimator.java

\* <Adam Cox>

\*

\* This is for

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**import** java.util.\*;

**public** **class** ChildHeightEstimator

{

Scanner stdIn = **new** Scanner(System.***in***); // takes care of inputs

String gender = ""; // Child's gender

String input = ""; // Used for input

**double** measurement = 0.0; // Records height

**double** dadMeasurement = 0.0; // Records Dad's height

**double** momMeasurmenet = 0.0; // Records Mom's height

**int** feet = 0; // Records the feet

**double** inches = 0; // Record the inches

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

// Prompts the user to enter the gender

**public** **void** promptForGender()

{

**boolean** valid = **false**; // Used for loops

**while** (!valid)

{

System.***out***.print("Enter the child's gender (female/male): ");

gender = stdIn.next().toLowerCase();

**if** (gender.equals("male") || gender.equals("female"))

{

valid = **true**;

}

**else**

{

System.***out***.println("Invalid gender value. Must enter \"female\" or"

+ " \"male\": " + gender);

}

} // end while

} // end of promptForGender

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

// records mother's height

**public** **void** promptForMotherHeight()

{

momMeasurmenet=**this**.getHeight("mother's");

} // end of promptForMotherHeight

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

// records father's height

**public** **void** promptForFatherHeight()

{

dadMeasurement=**this**.getHeight("father's");

} // end of promptForFatherHeight

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

// This displays child's height

**public** **void** displayChildHeight()

{

measurement = (dadMeasurement+momMeasurmenet) / 2;

**if** (gender.equals("male"))

{

measurement+=2.5;

}

**else**

{

measurement-=2.5;

}

feet = (**int**) (measurement / 12);

inches = measurement - (feet \* 12);

System.***out***.println("The child's estimated height is "+ feet

+" feet, "+inches +" inches.");

} // end of displayChildHeight

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

// Helper for getting height

**private** **double** getHeight(String sex)

{

**boolean** valid = **false**; // Used for loops

**do**

{

**try**

{

System.***out***.println("Enter " + sex + " height in inches: ");

input = stdIn.next();

measurement = Double.*parseDouble*(input);

**if** (measurement >= 1)

{

valid = **true**;

}

**else**

{

System.***out***.println("Invalid entry. Must be positive.");

}

}

**catch**(NumberFormatException nfe)

{

System.***out***.println("Invalid entry. Must be a decimal number.");

}

} **while** (!valid);

**return** measurement;

} // end of loop

} // end of getHeight

Enter the child's gender (female/male): m

Invalid gender value. Must enter "female" or "male": m

Enter the child's gender (female/male): male

Enter mother's height in inches:

0

Invalid entry. Must be positive.

Enter mother's height in inches:

cat

Invalid entry. Must be a decimal number.

Enter mother's height in inches:

60.0

Enter father's height in inches:

-70

Invalid entry. Must be positive.

Enter father's height in inches:

70

The child's estimated height is 5 feet, 7.5 inches.