

2ACE Exercises 3–6**Investigation 2****Data Distributions****Caffeine Content of Selected Beverages****Soda Drinks**

Name	Caffeine in 8 Ounces (mg)
Soda A	38
Soda B	37
Soda C	27
Soda D	27
Soda E	26
Soda F	24
Soda G	21
Soda H	15
Soda J	23

Other Drinks

Name	Caffeine in 8 Ounces (mg)
Energy Drink A	77
Energy Drink B	70
Energy Drink C	25
Energy Drink D	21
Iced Tea A	19
Iced Tea B	10
Coffee Drink	83
Hot Cocoa	2
Juice Drink	33

Use the table above for Exercises 3–6.

3. a. What is **the mean** amount of caffeine in the soda drinks?

b. Make a **line plot** of the amount of caffeine in the **soda drinks**.

c. What is **the mean** amount of caffeine in the **other drinks**?

2ACE Exercise 3-6 (continued)

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d. Make a **line plot** of the amount of caffeine for the other drinks.

e. Write three **statements comparing** the amount of caffeine in soda and in other drinks.

1.

2.

3.

4. Indicate whether each statement is **true or false**.

a. Soda B has more caffeine than Soda F or Soda D. _____

b. *Energy Drink C* has about 3 times as much caffeine as the same amount of *Energy Drink A*. _____

c. Of the drinks in the table, 75% have **25 mg or less of caffeine** in an 8-ounce serving. _____

How many drinks are listed in the chart?

How many of the drinks have 25 mg or less of caffeine for an 8-ounce serving?

What is the percent of drinks with 25 mg or less in an 8-ounce serving?

2ACE Exercise 3-6 (continued)

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5. Moderate caffeine intake for adults is 300 mg per day, but it is recommended that 10- to 12-year-olds have no more than 85 mg per day. Has a **middle school student** who drinks **three** 12-ounce cans of Soda F consumed more of his or her recommended intake of caffeine than an adult who drinks **two** servings of Coffee Drink?

How many total **ounces** of Soda F will the student drink in **three** 12 ounce cans?

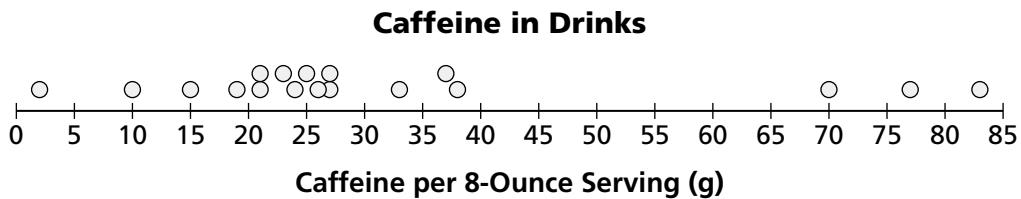
From the table, 8 ounces of Soda F has 24 milligrams of caffeine (24 mg of caffeine per 8 ounces). How many milligrams of caffeine did he/she drink with **three** 12-ounce cans?

How much more is this amount of caffeine than what is recommended for a 10–12 year old?

How much caffeine does an adult drink if he/she drinks *two* Coffee Drinks (83 mg of caffeine per 16 ounces)?

How much more is this amount of caffeine than what is recommended for an adult?

6. Are the **mean and median** for caffeine content in the graph below almost the same values?



What is the mean?

What is the median?

Are they almost the same?

Explain.