



New York State Testing Program

Mathematics Book 3

Grade **8**

Sample Test 2005

Name _____

TIPS FOR TAKING THE SAMPLE TEST

Here are some suggestions to help you do your best:

- Be sure to read carefully all the directions in the test book.
- You may use your tools to help you solve any problem on the test.
- Read each question carefully and think about the answer before writing your response.
- Be sure to show your work when asked. You may receive partial credit if you have shown your work.
- Use your calculator to help you solve the problems on this part of the test.



This picture means that you will use your ruler.

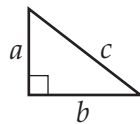


This picture means that you will use your protractor.

Mathematics Reference Sheet

FORMULAS

Pythagorean Theorem



$$c^2 = a^2 + b^2$$

Simple Interest

$$I = prt$$

Distance Formula

$$d = rt$$

CONVERSIONS

Temperature Conversion

$$F = \frac{9}{5}C + 32$$

$$C = \frac{5}{9}(F - 32)$$

Measurement Conversions

$$1 \text{ mile} = 5,280 \text{ feet}$$

$$1 \text{ yard} = 3 \text{ feet}$$

34

Luisa works in her grandfather's jewelry shop. She deposits her earnings in a savings account. Her savings account balances for five of the last six weeks are shown in the function table below.

LUISA'S SAVINGS ACCOUNT

Week (w)	Savings Balance (b)
1	\$510
2	\$620
3	\$730
4	\$840
5	?
6	\$1,060

Part A

According to the data in the function table, write a function rule that shows how much money Luisa saves each week.

Rule _____

Part B

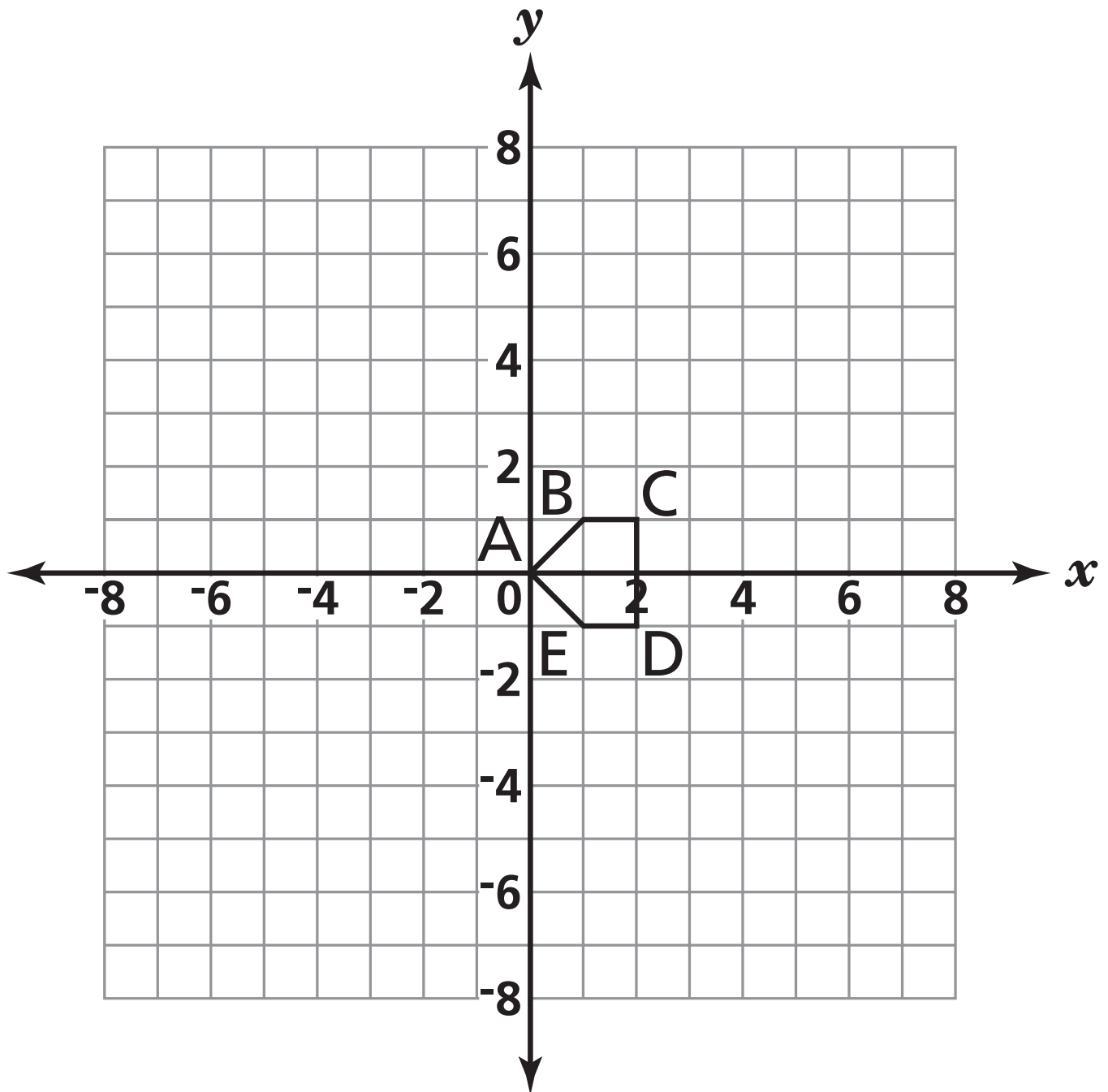
Based on the table, how much money is in Luisa's savings account in week 5?

Answer \$ _____

Go On

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On the grid below, draw the image of pentagon ABCDE with center at the origin after a dilation of 3. Label the image $A'B'C'D'E'$.



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Tracy's dog eats 8 ounces of dog food every day. How many pounds of dog food will her dog eat in 40 days?

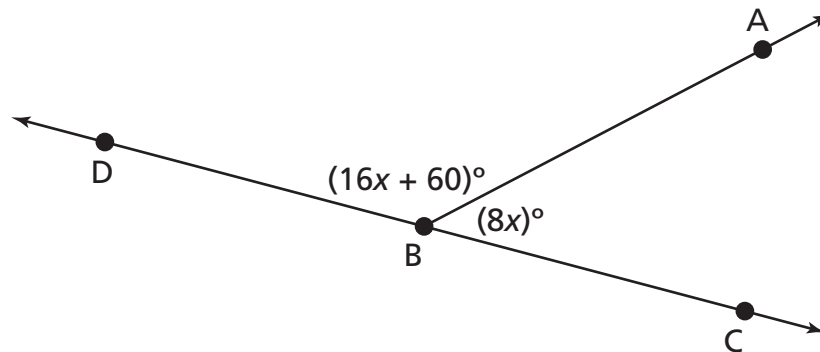
Show your work.

Answer _____ pounds

Go On

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In the figure below, \overline{DC} intersects \overrightarrow{BA} at point B.



[not drawn to scale]

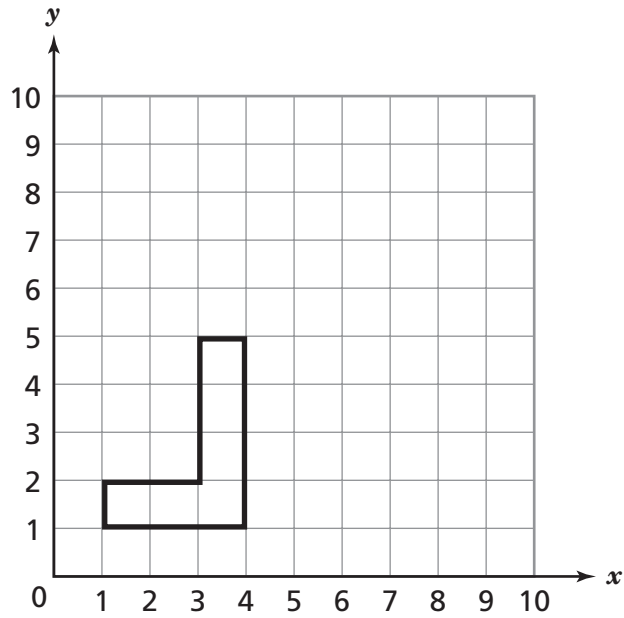
What is the measure, in degrees, of $\angle ABC$?

Show your work.

Answer _____ degrees

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Shane uses a grid to decide how to arrange his living room furniture. The shape and position of Shane's sofa are shown on the grid below. He moves the sofa 4 units to the right and 2 units up. On the grid below, draw the new location of Shane's sofa.



Go On

39

Juanita solved an equation incorrectly, as shown below.

$$3x + 6 = 24$$

$$\frac{3x}{3} + 6 = \frac{24}{3}$$

$$x + 6 = 8$$

$$x = 2$$

Part A

On the lines below, explain in words the mistake Juanita made.

Part B

Solve the equation $3x + 6 = 24$ correctly.

Show your work.

Answer _____

40

Xavier bought a shirt that was on sale for 20% off the original price. He also used a coupon that gave him an additional 15% off the sale price of the shirt. The original price of the shirt was \$37. What is the new price of the shirt before tax?

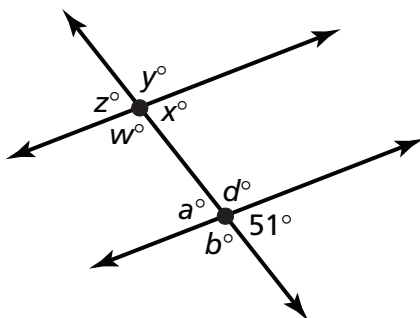
Show your work.

Answer \$ _____

Go On

41

The figure below shows parallel lines cut by a transversal.



[not drawn to scale]

Part A

Based on the information in the figure, complete the table below with the measures for each angle.

Angle	a°	b°	d°	w°	x°	y°	z°
Degree Measure							

Part B

Name one pair of supplementary angles in the figure.

Answer _____

42

Write an equation that represents "eight less than twice a number is forty-two."

Equation _____

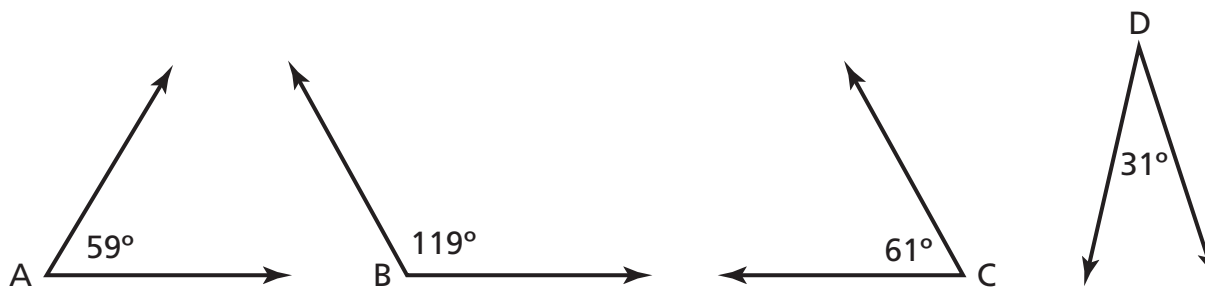
Solve the equation.

Show your work.

Answer _____

Go On

43 Bryce drew the four angles shown below.



Part A

Which pair of angles are complementary? _____

Which pair of angles are supplementary? _____

Part B

On the lines below, explain how you determined your answers.

Brian and Steve want to compare the prices of their favorite cereals to determine which is less expensive. The table below shows the price of each box of cereal and the number of ounces in each box.

BOXES OF CEREAL

	Total Weight (in ounces)	Total Price (per box)	Price (per ounce)
Brian's Cereal	24 oz.	\$3.84	
Steve's Cereal	32 oz.	\$4.48	

Part A

Complete the table above by calculating the price per ounce of each kind of cereal.

Part B

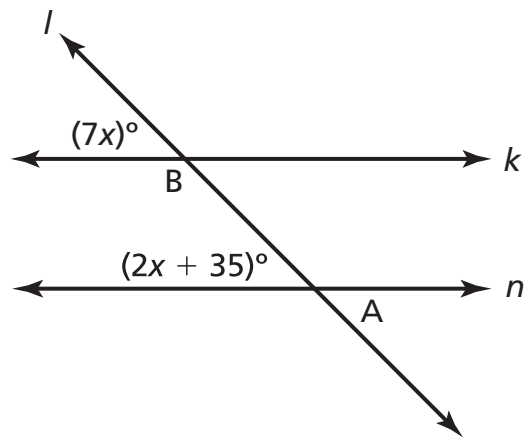
Whose cereal is less expensive per ounce?

Show your work.

Answer _____

45

In the figure below, lines k and n are parallel. Line l is a transversal.



[not drawn to scale]

Part A

What is the value of x ?

Show your work.

Answer _____

Part B

What is the measure, in degrees, of $\angle A$?

Show your work.

Answer _____ degrees

Part C

What is the measure, in degrees, of $\angle B$?

Show your work.

Answer _____ degrees

STOP



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