

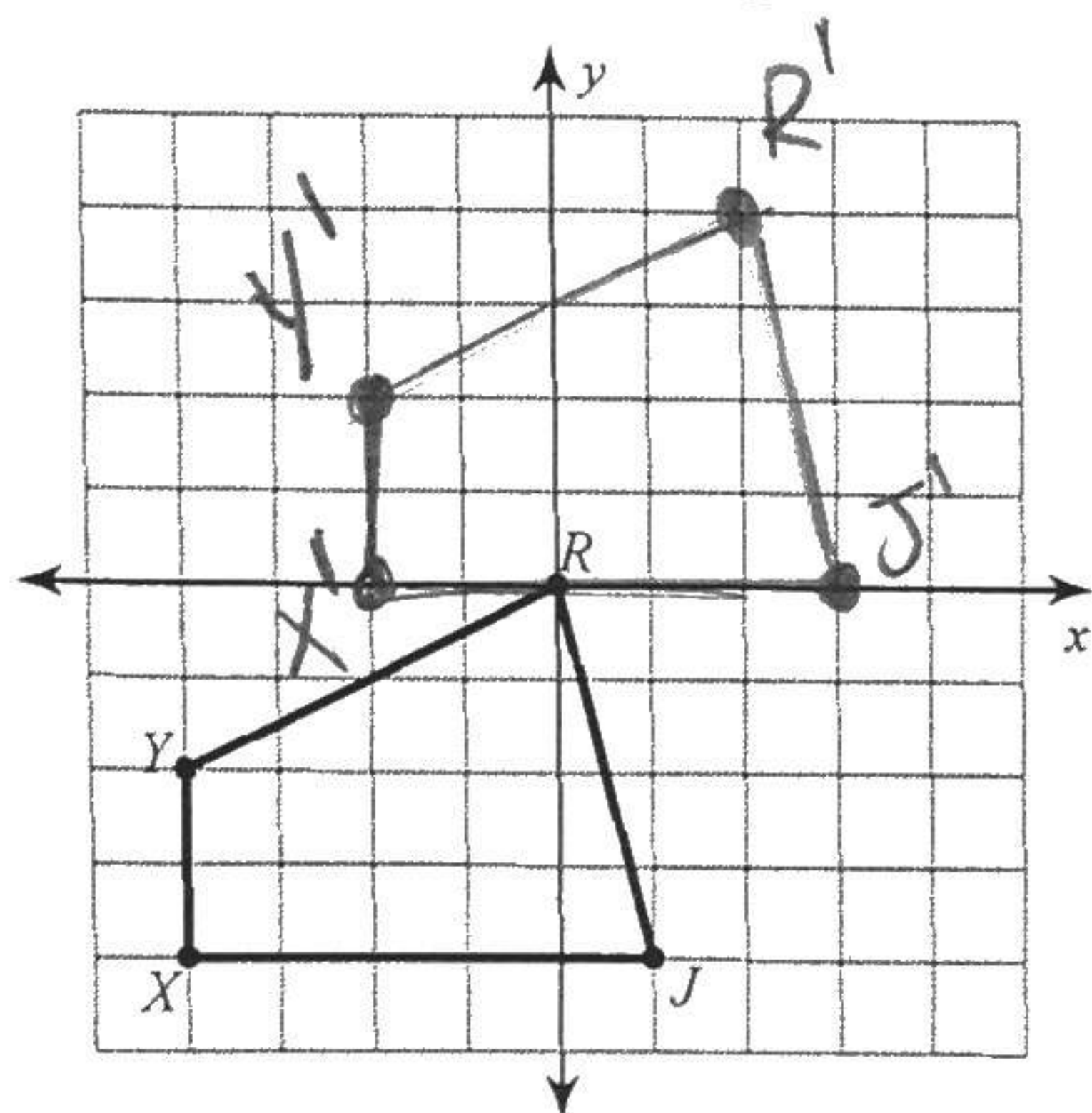
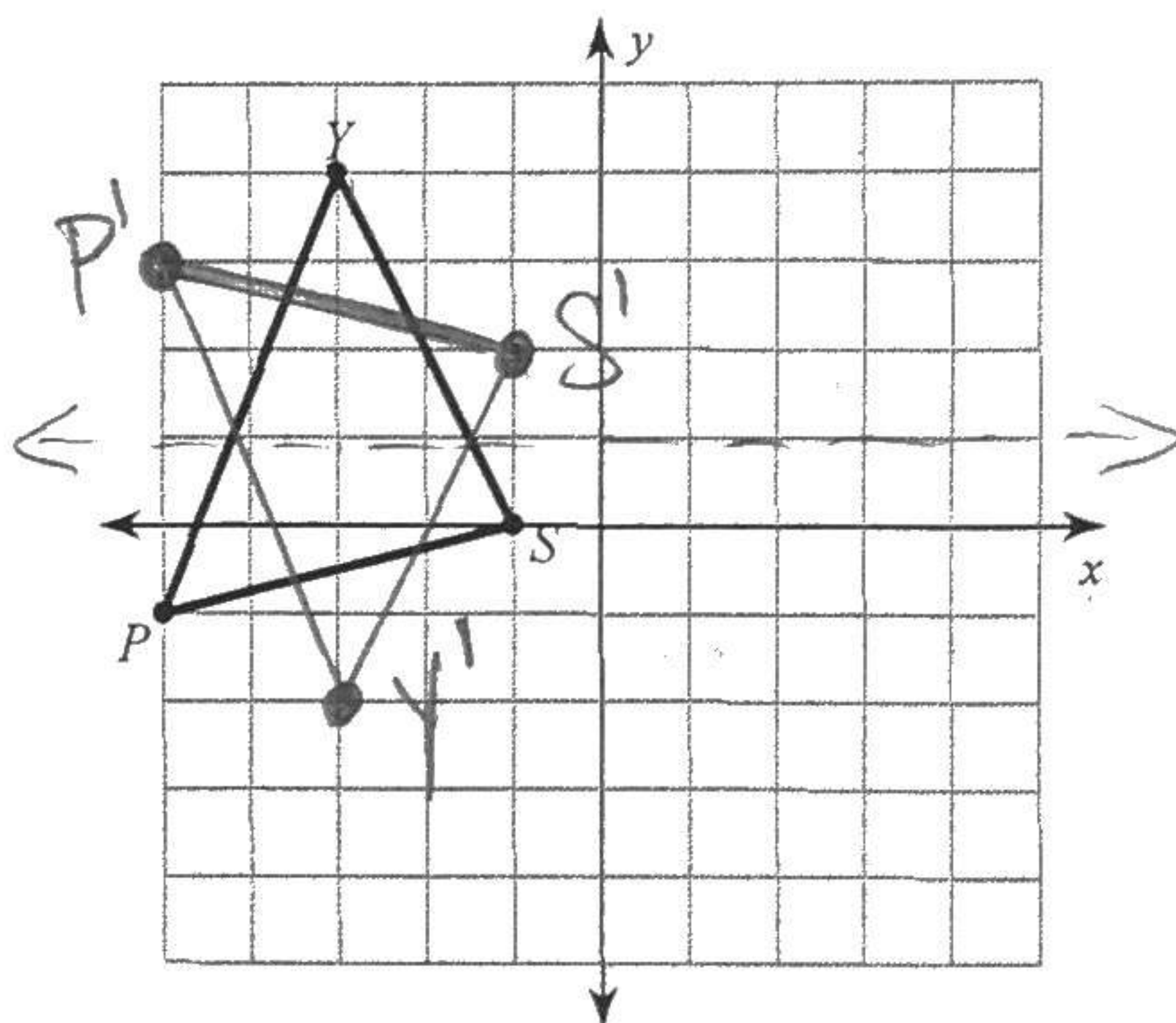
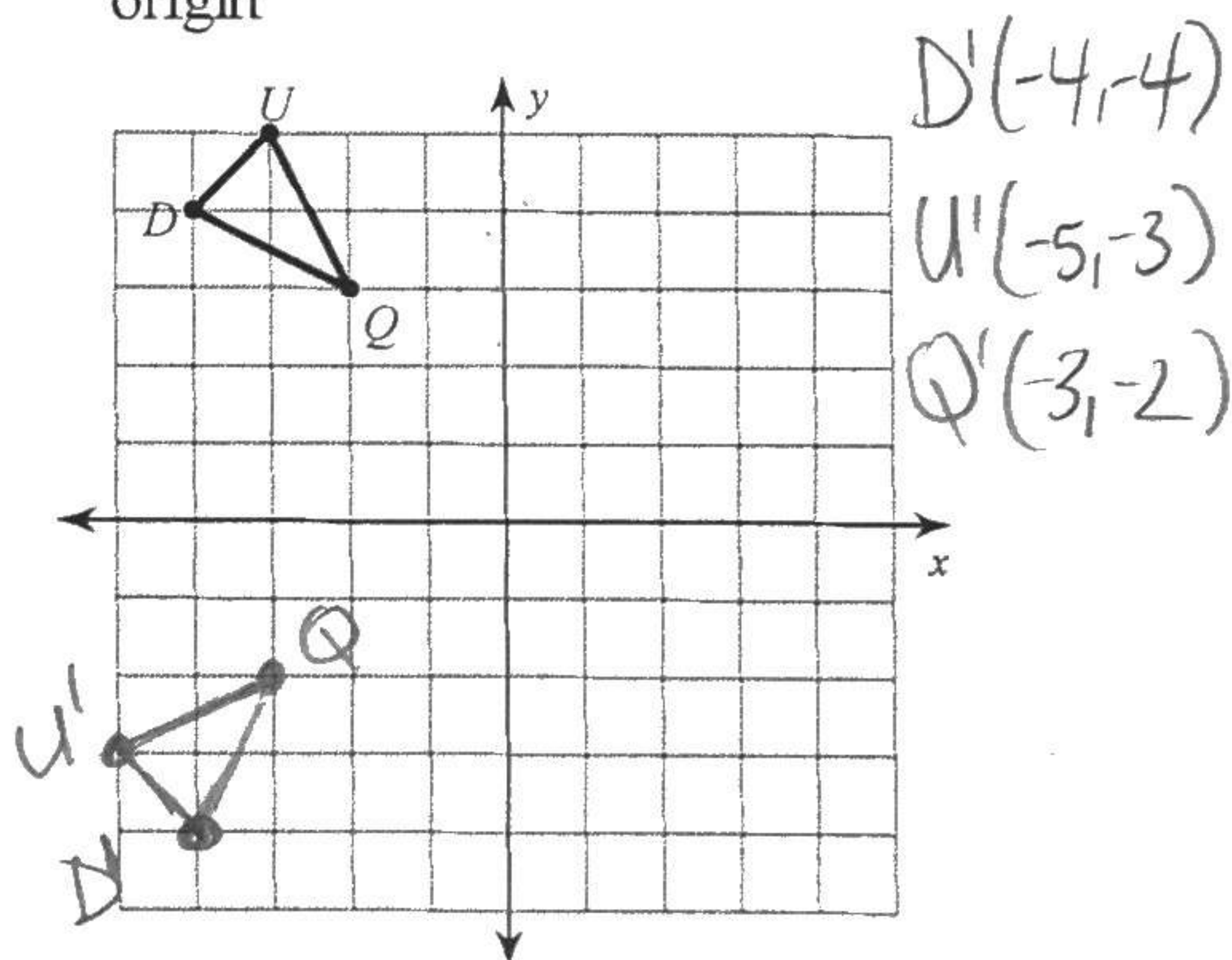
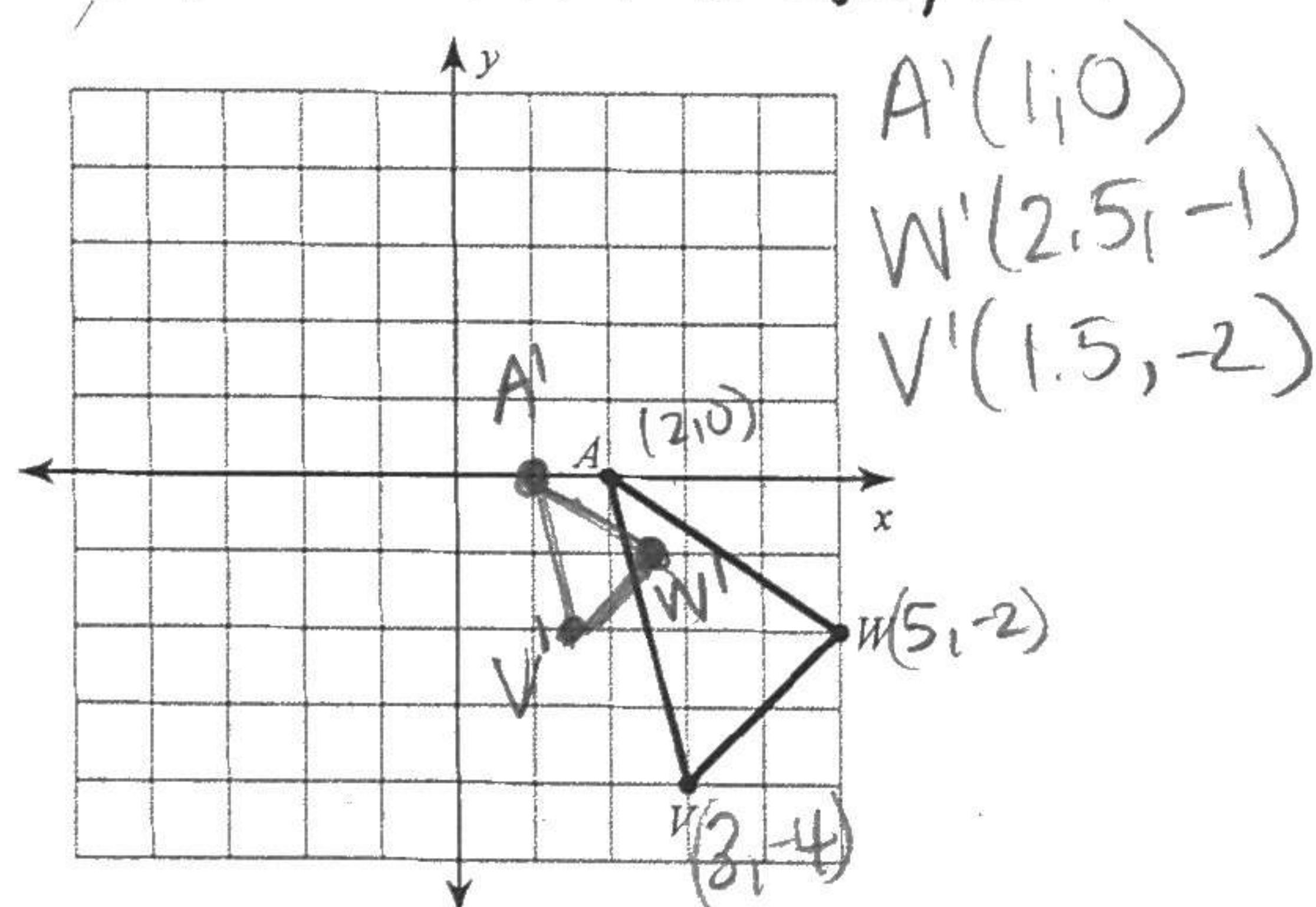
Geometry Unit Test - Practice Test

Date

Period

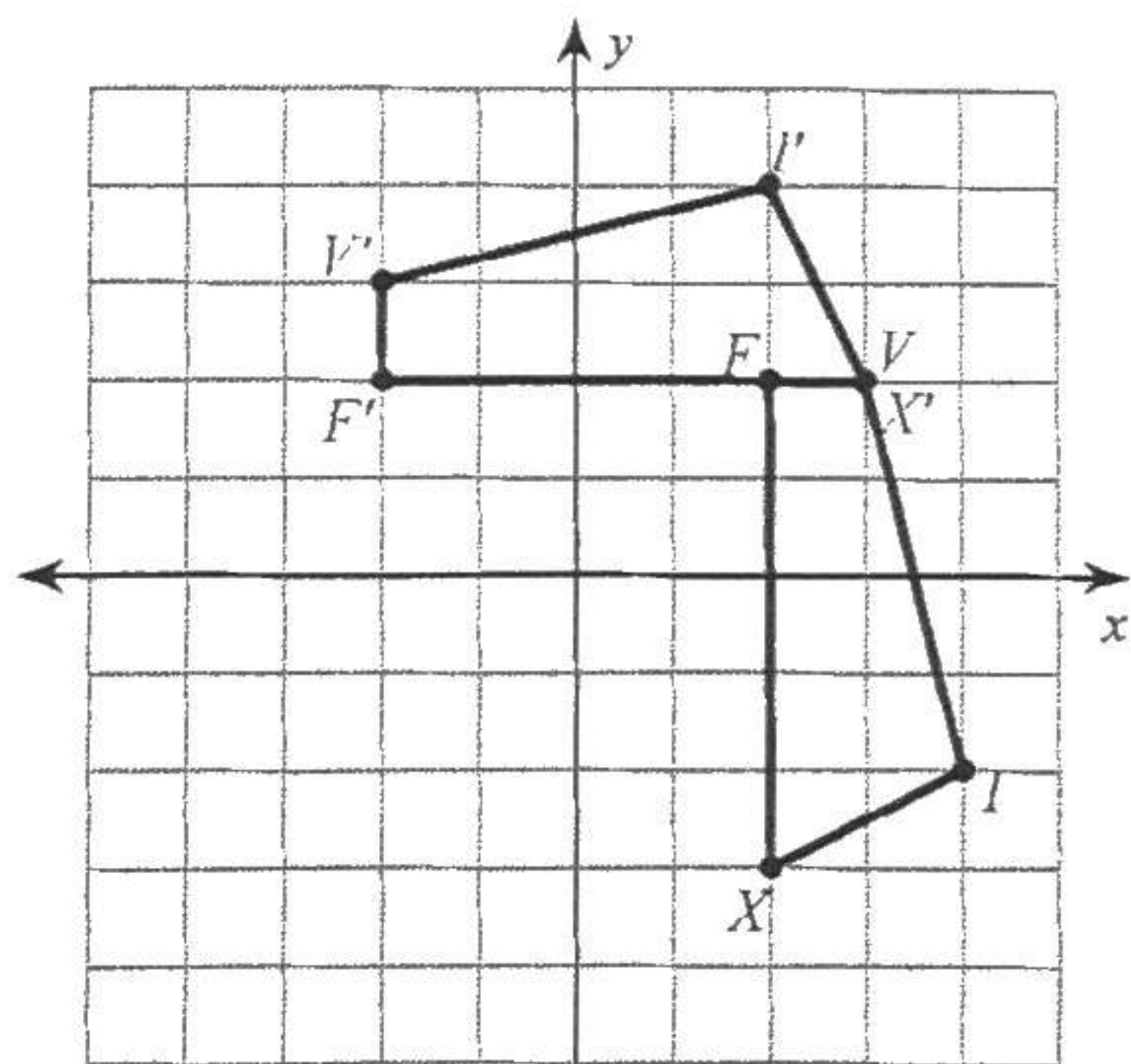
Graph the image of the figure using the transformation given.

1) translation: 2 units right and 4 units up

2) reflection across $y = 1$ 3) rotation 90° counterclockwise about the origin4) dilation centered at the origin, scale factor = $\frac{1}{2}$ 

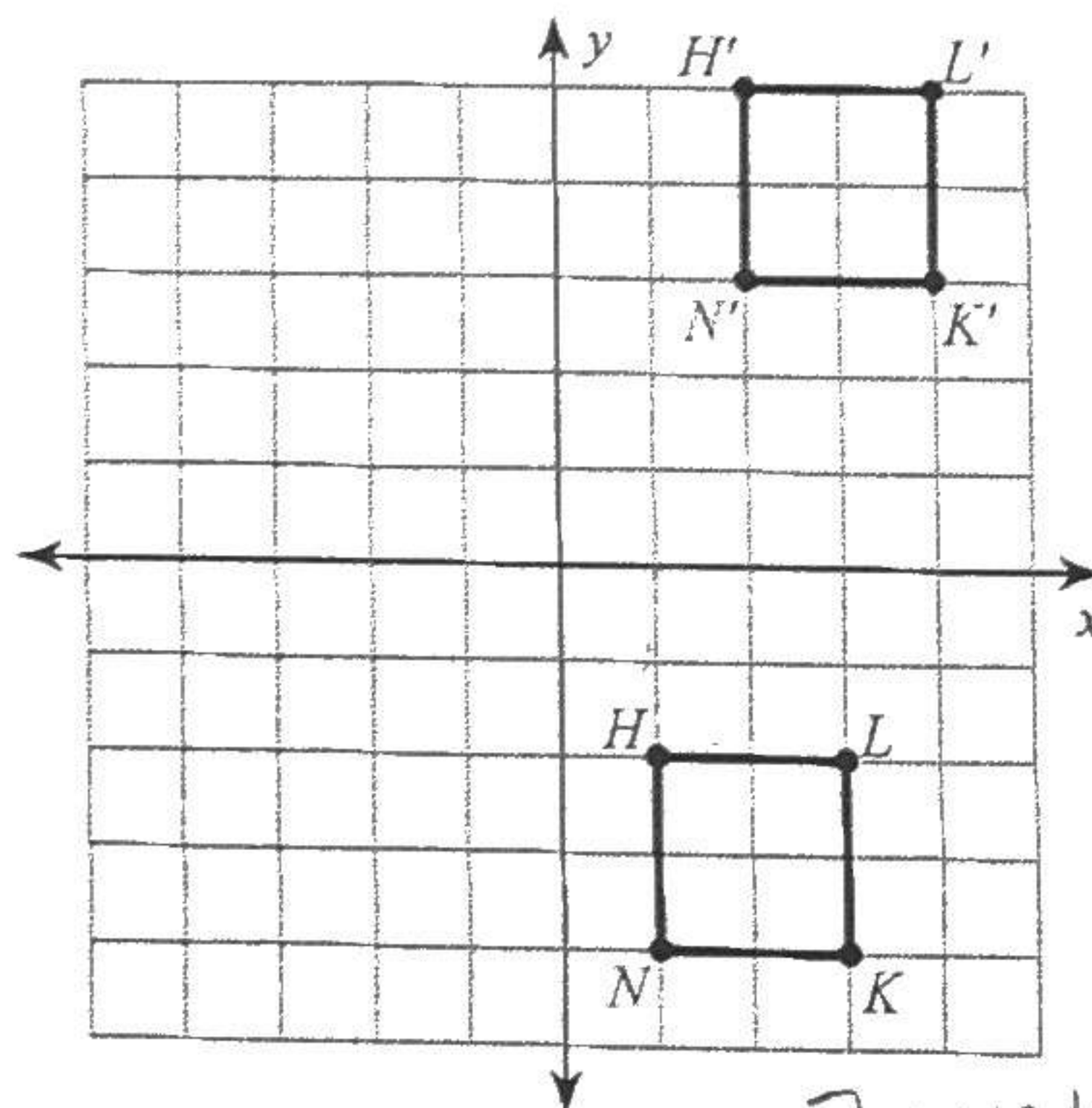
Write a rule to describe each transformation.

5)



rotation 90° counterclockwise
about the origin

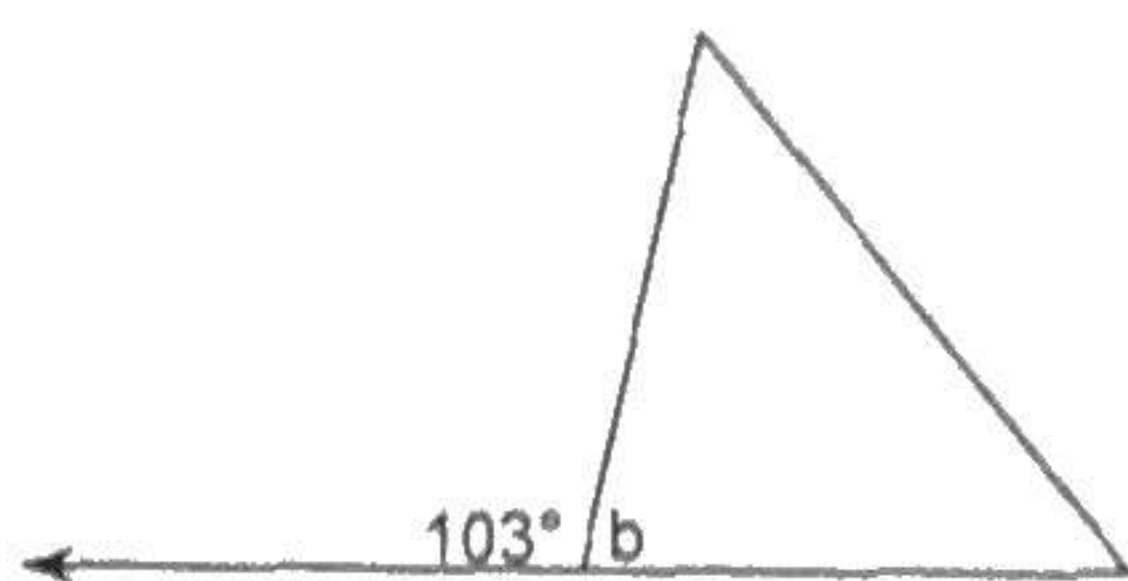
6)



translation 7 units up
1 unit right

Find the measure of angle b.

7)

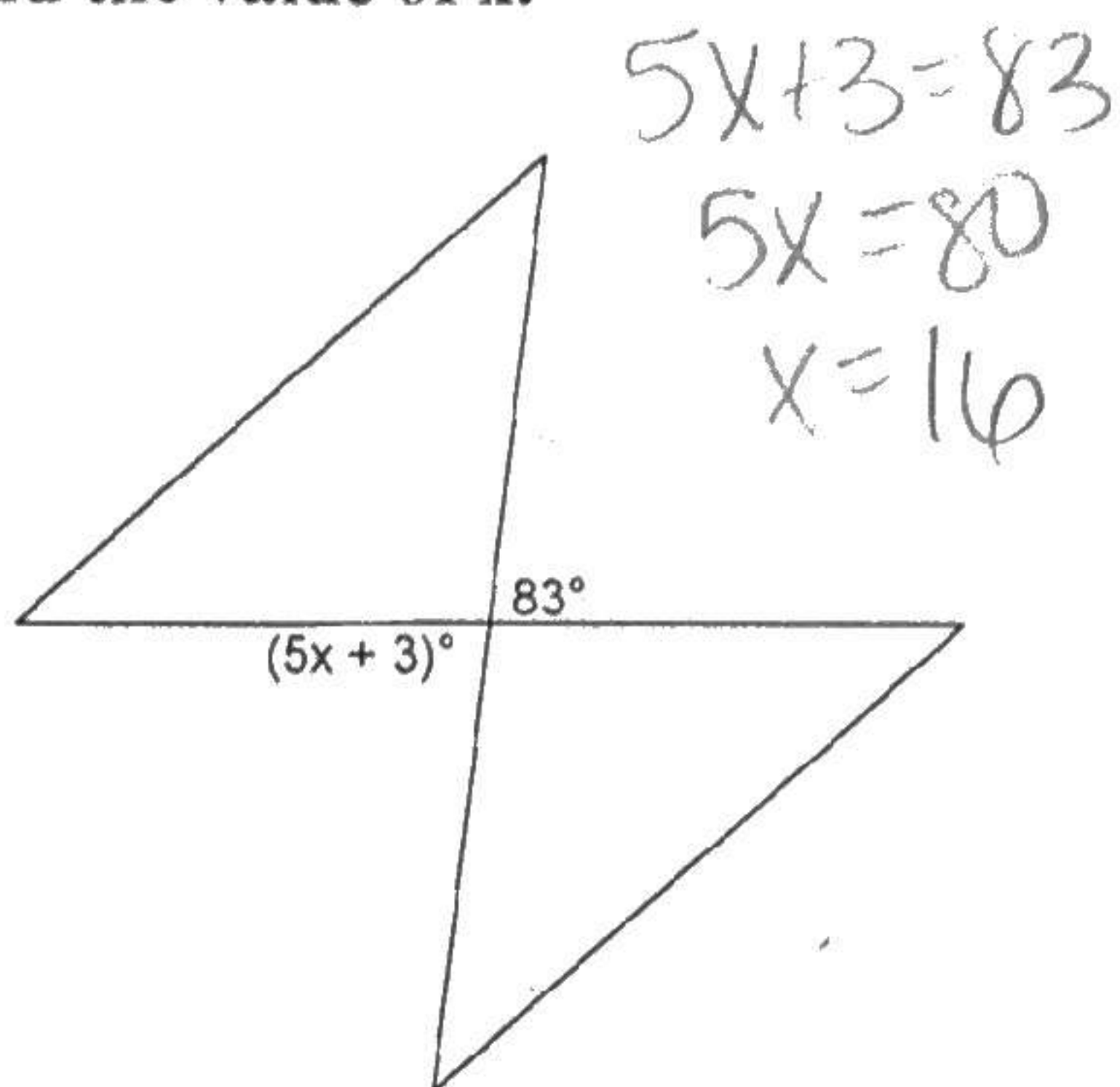


$$180 - 103$$

$$m\angle b = 77^\circ$$

Find the value of x.

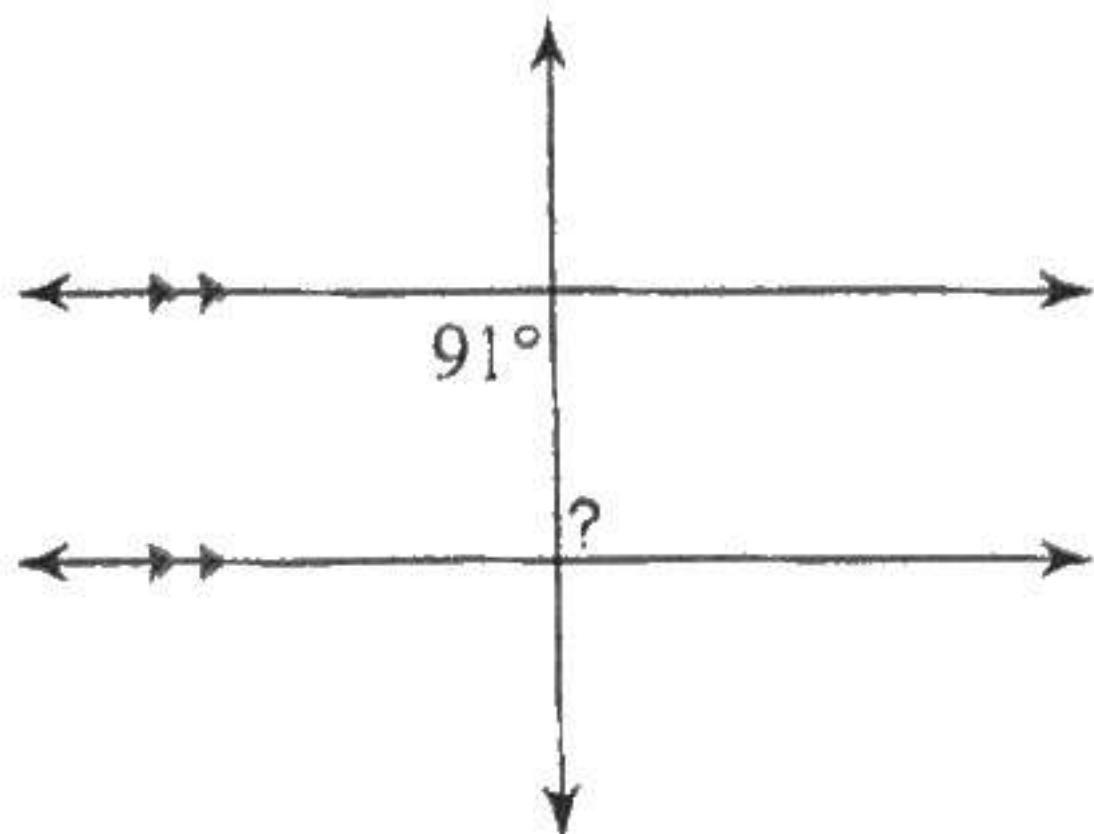
9)



$$x = 16$$

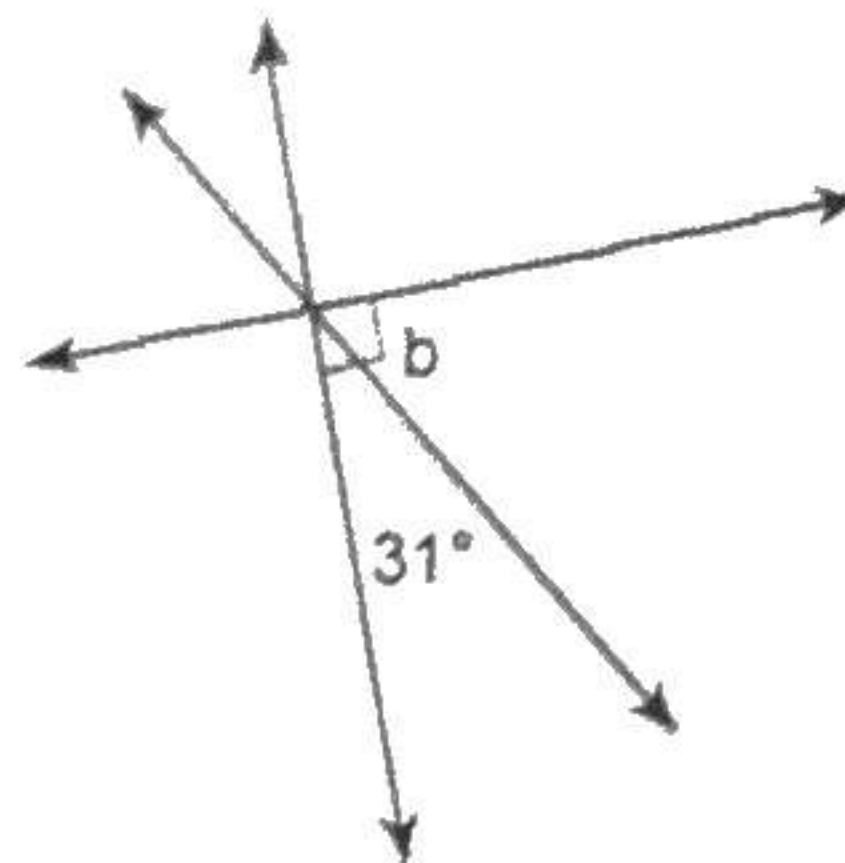
Find the measure of each angle indicated.

11)



$$91^\circ$$

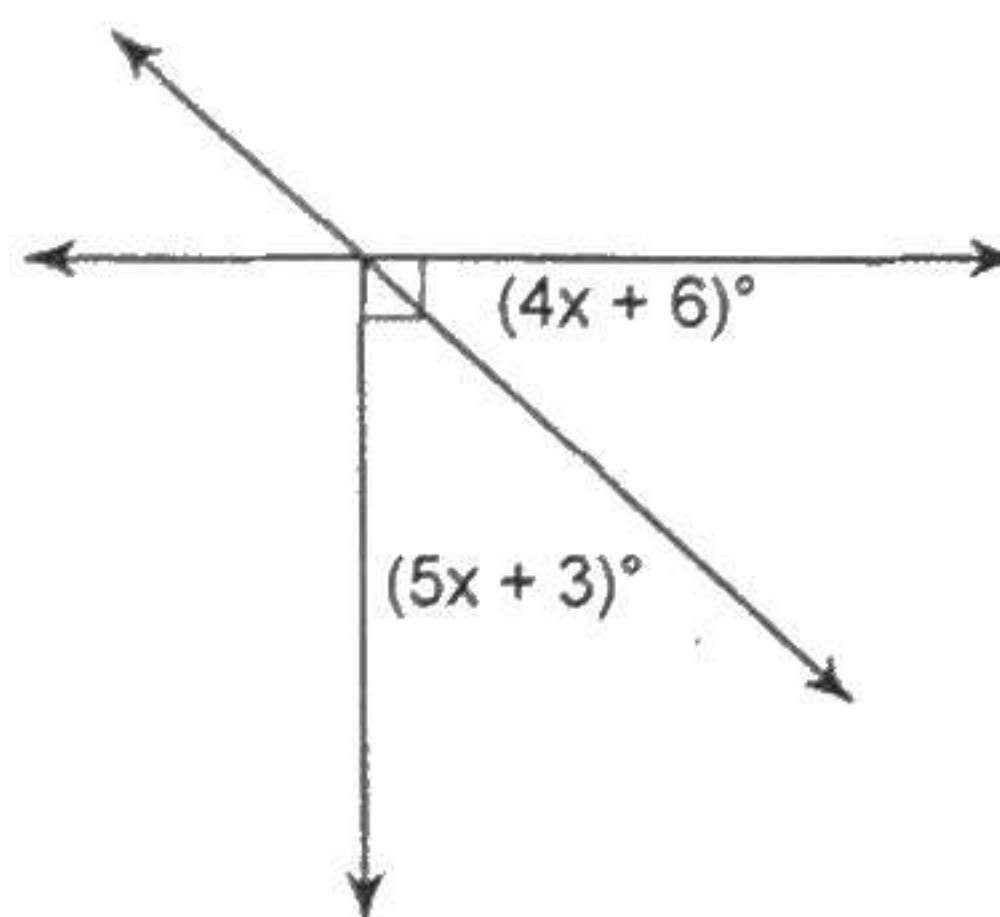
8)



$$90 - 31$$

$$m\angle b = 59^\circ$$

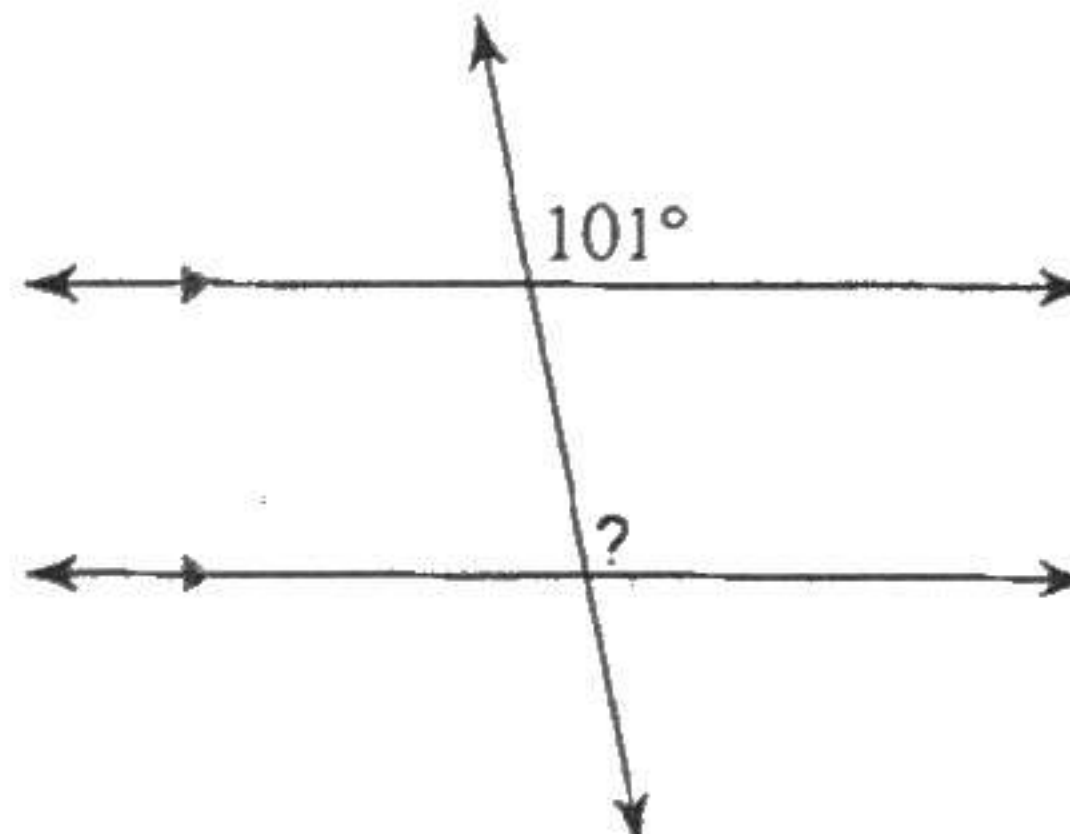
10)



$$\begin{aligned} 4x + 6 + 5x + 3 &= 90 \\ 9x + 9 &= 90 \\ 9x &= 81 \\ x &= 9 \end{aligned}$$

$$x = 9$$

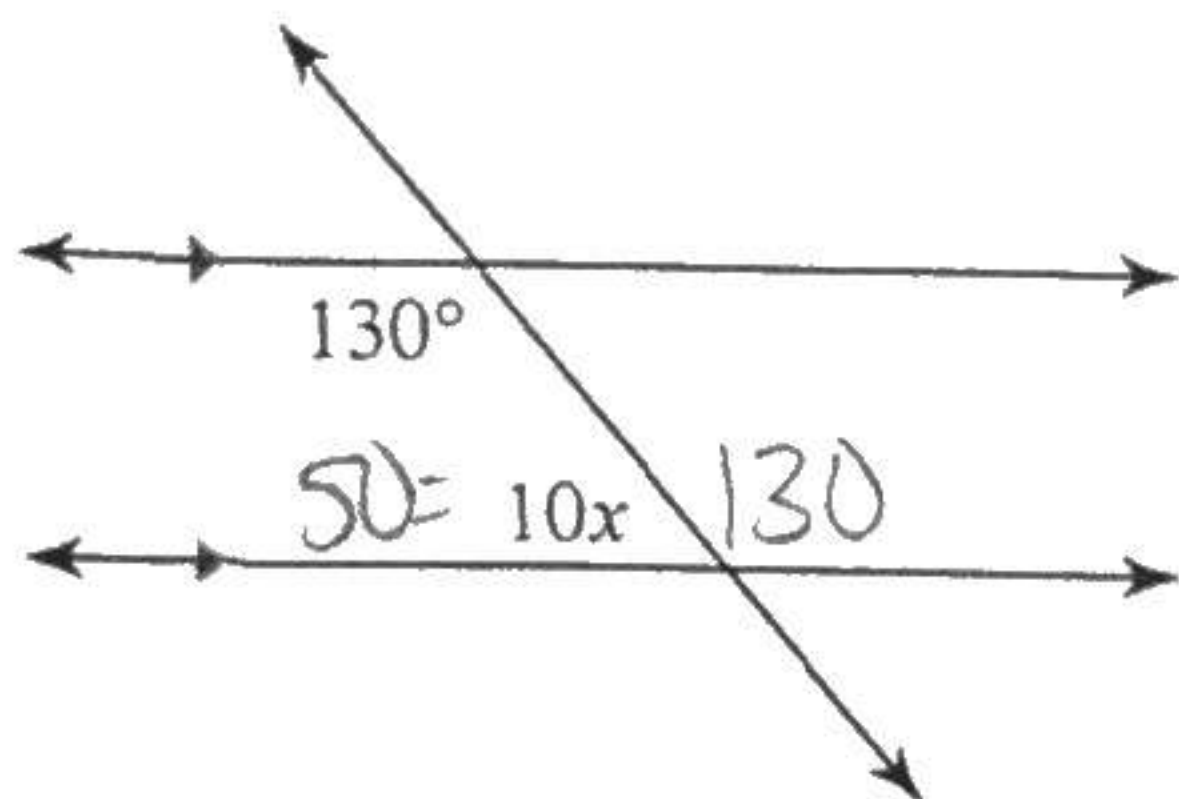
12)



$$101^\circ$$

Solve for x.

13)

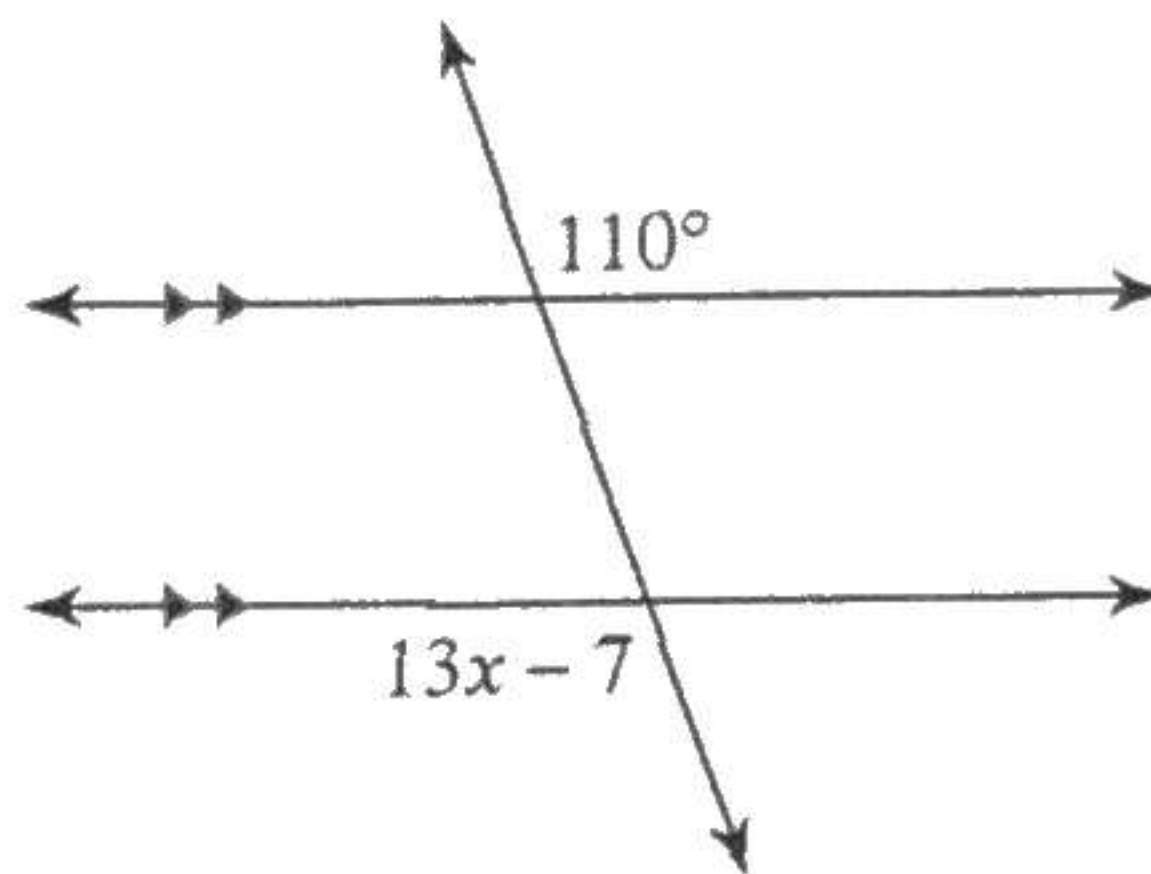


$$50 = 10x$$

$$5 = x$$

$$x = 5$$

14)



$$13x - 7 = 110$$

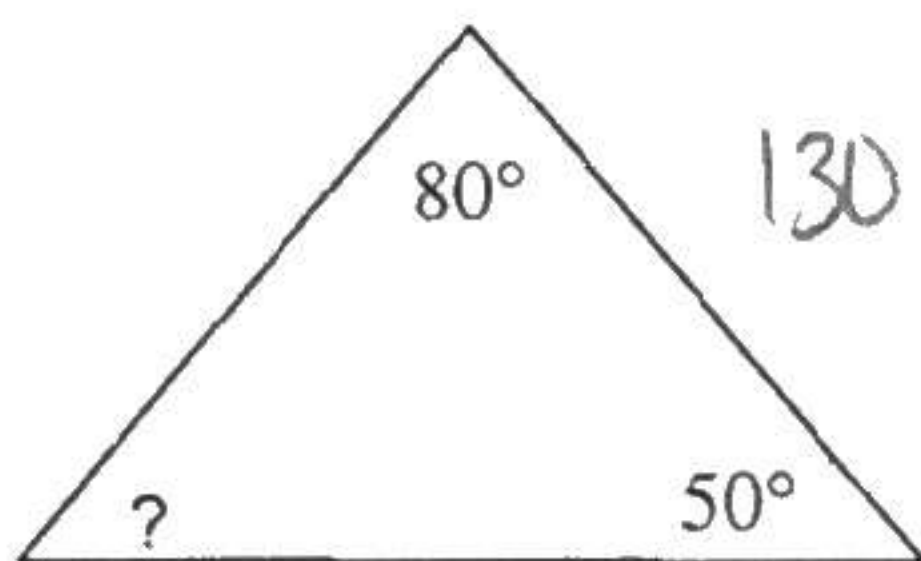
$$13x = 117$$

$$x = 9$$

$$x = 9$$

Find the measure of each angle indicated.

15)

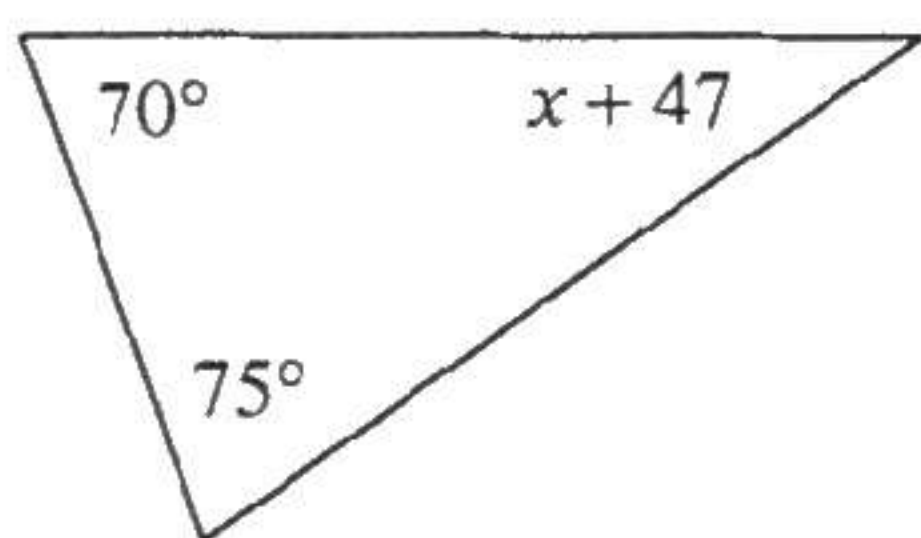


$$180 - 130$$

$$50^\circ$$

Solve for x.

16)



$$x + 47 + 70 + 75 = 180$$

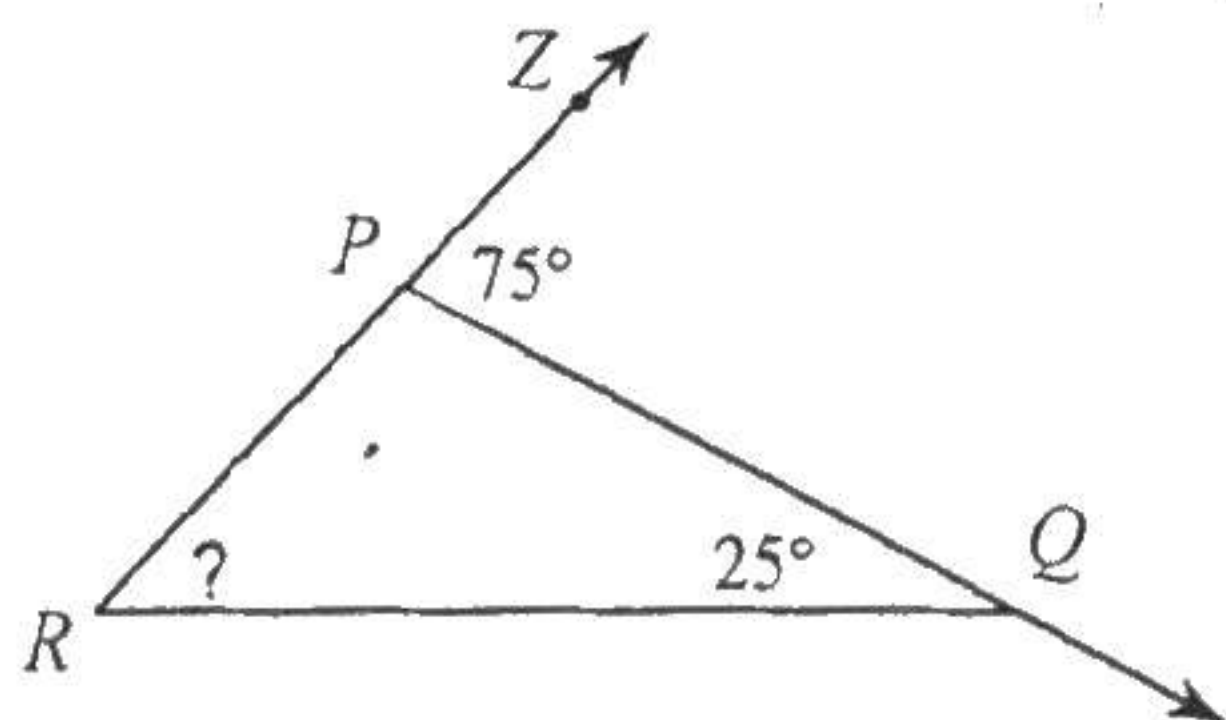
$$x + 192 = 180$$

$$x = -12$$

$$x = -12$$

Find the measure of each angle indicated.

17)

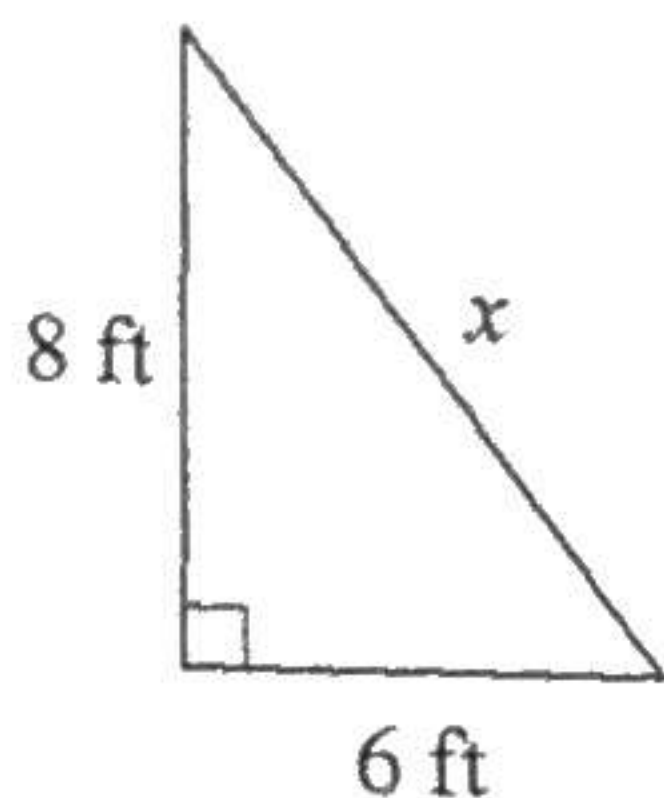


$$75 - 25 = 50$$

$$50^\circ$$

Find the missing side of each triangle. Round your answers to the nearest tenth if necessary.

18)

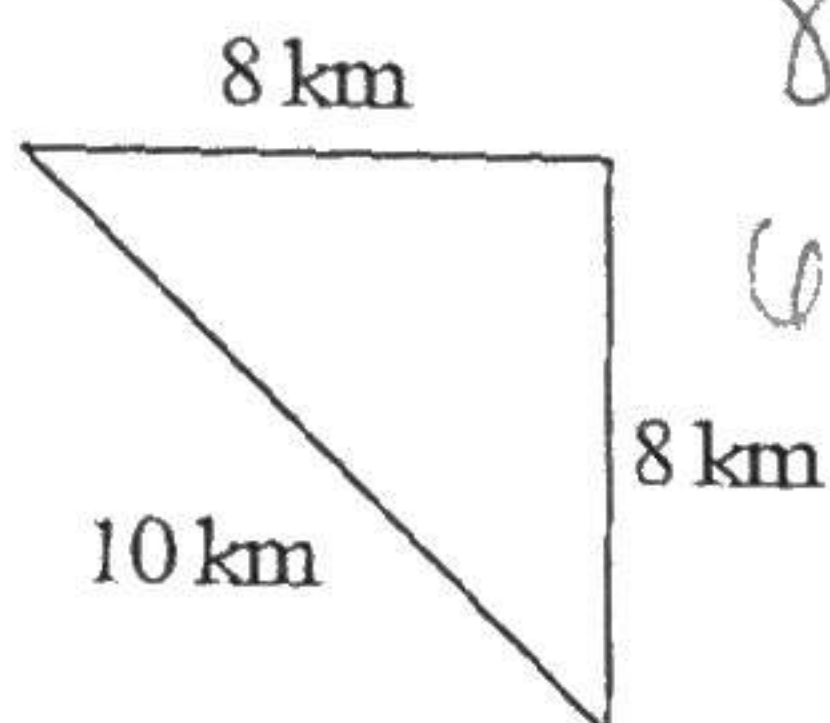


$$\begin{aligned} 8^2 + 6^2 &= x^2 \\ 64 + 36 &= x^2 \\ 100 &= x^2 \\ 10 &= x \end{aligned}$$

10 ft

State if each triangle is a right triangle. Justify your reasoning using algebra.

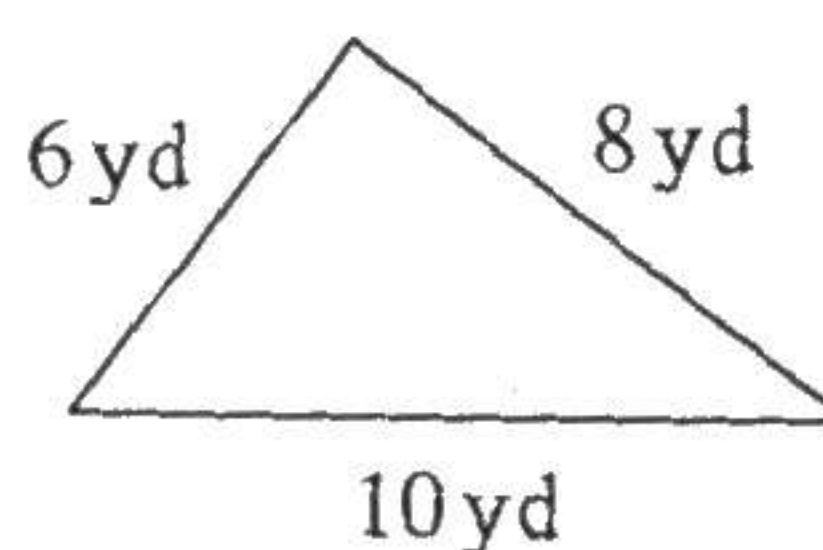
19)



$$\begin{aligned} 8^2 + 8^2 &\stackrel{?}{=} 10^2 \\ 64 + 64 &= 100 \\ 128 &\neq 100 \end{aligned}$$

NO

20)

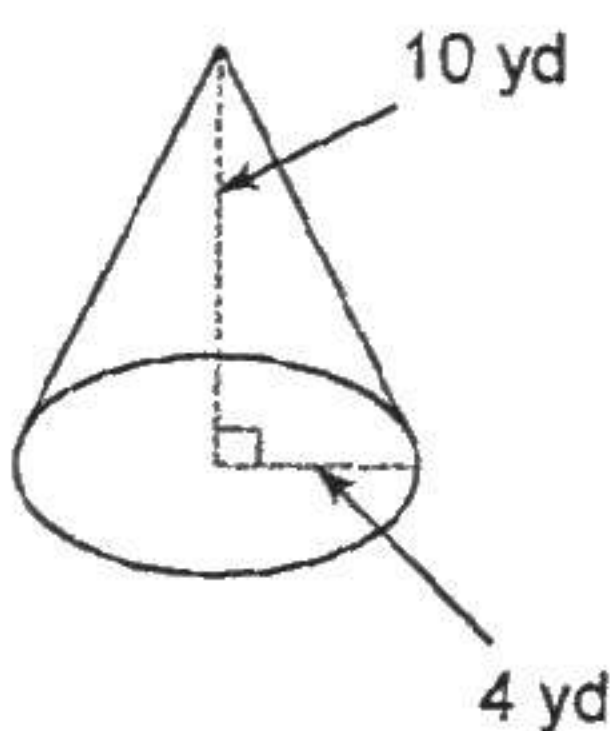


$$\begin{aligned} 6^2 + 8^2 &\stackrel{?}{=} 10^2 \\ 36 + 64 &= 100 \\ 100 &= 100 \end{aligned}$$

yes

Find the volume of each figure. Round your answers to the nearest hundredth, if necessary.

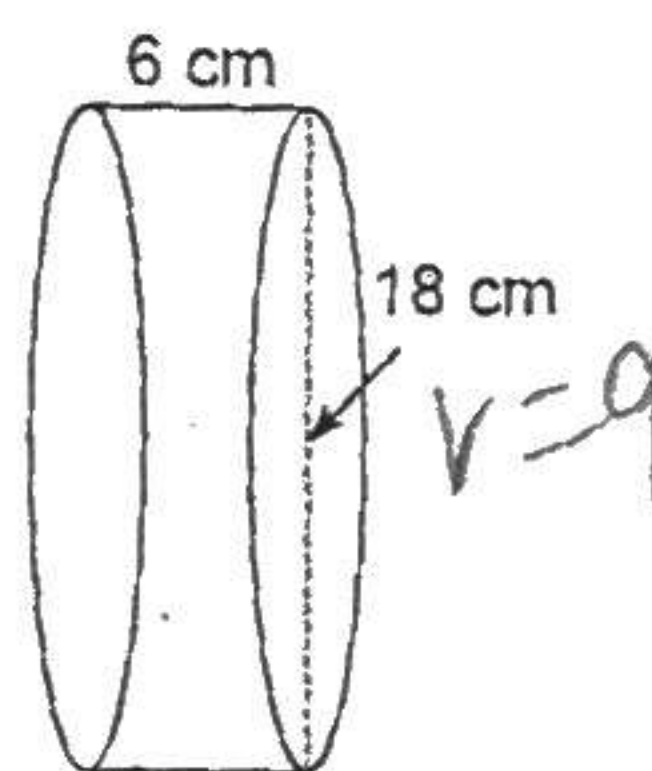
21)



$$\begin{aligned} V &= \frac{1}{3} \pi r^2 h \\ &= \frac{1}{3} \pi 4^2 (10) \end{aligned}$$

167.47 yd³

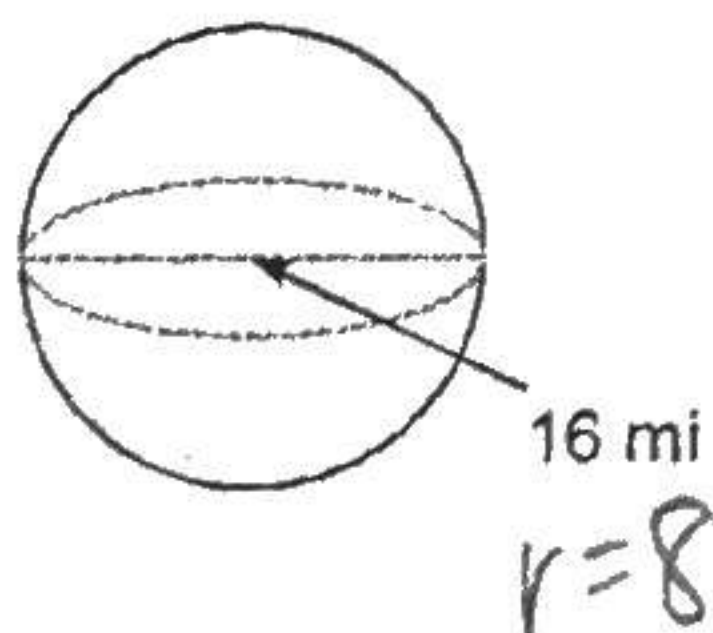
22)



$$\begin{aligned} V &= \pi r^2 h \\ &= \pi 9^2 (18) \end{aligned}$$

1526.04 cm³

23)



$$\begin{aligned} V &= \frac{4}{3} \pi r^3 \\ &= \frac{4}{3} \pi 8^3 \end{aligned}$$

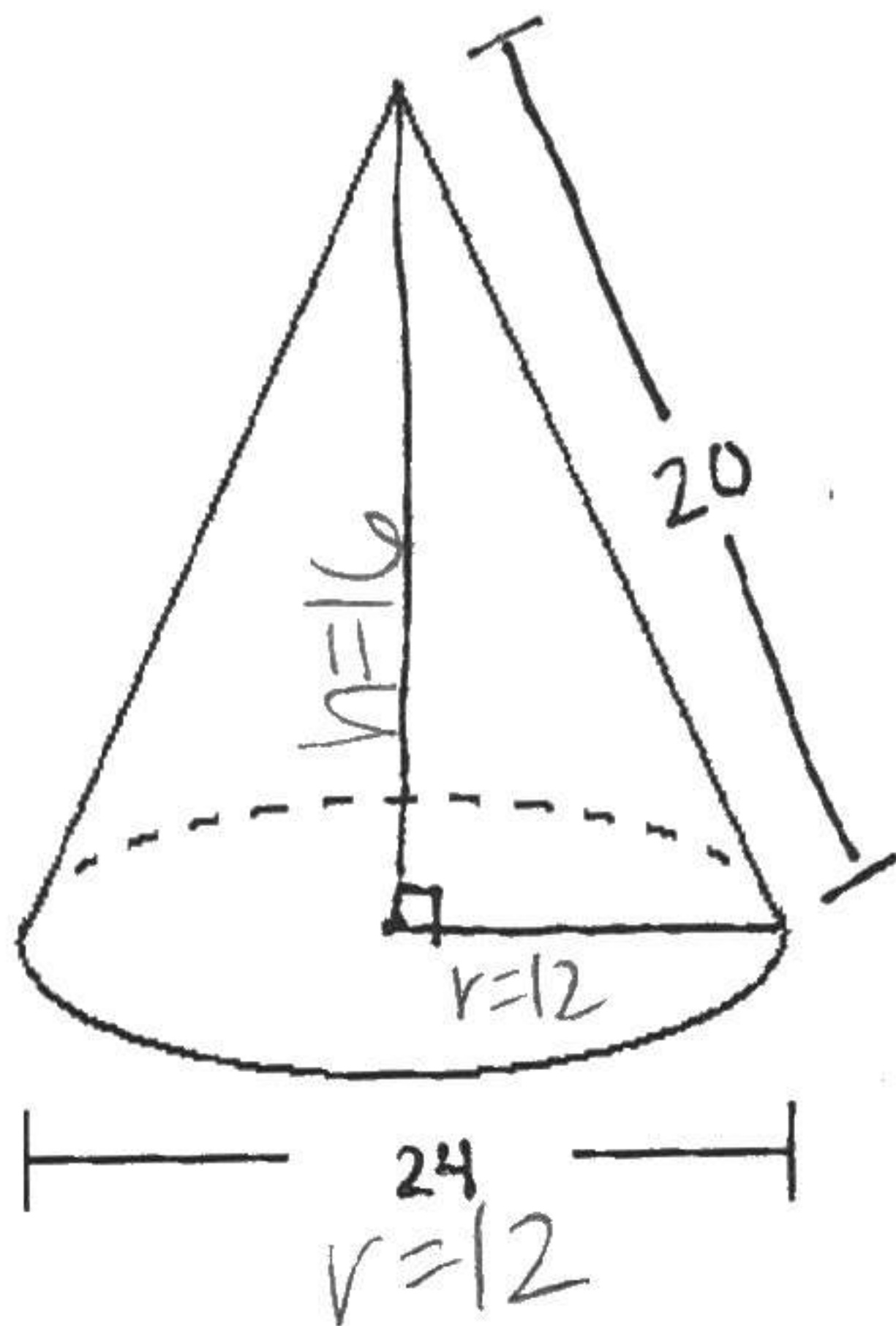
2143.57 mi³

Name _____

Period _____

24. Michael wants to calculate the volume of the cone below. He knows the formula requires that he knows the radius and the height. He is only given the diameter and the slant height.

- Explain how Michael can find the radius.
- Explain how Michael can use the Pythagorean Theorem to find the height of the cone.
- Calculate the volume of the cone.



a.) Find half of 24. Divide 24 by 2.
Radius is 12.

b.) The height is the final leg of the right triangle since the radius is the other leg (12) The hypotenuse is 20. The height is 16

$$\begin{aligned}12^2 + x^2 &= 20^2 \\144 + x^2 &= 400 \\x^2 &= 256 \\x &= 16\end{aligned}$$

$$\begin{aligned}V &= \frac{1}{3}\pi r^2 h \\&= \frac{1}{3}\pi 12^2 (16) \\&= 2411.52\end{aligned}$$

c.) 2411.52 units³

25. Write the letter of the diagram/definition that best describes or illustrates each vocabulary word on the line.

A $m\angle 1 + m\angle 2 + m\angle 3 = 180^\circ$	B $\angle 1$ and $\angle 2$	C Translation	D $\angle 1$ and $\angle 2$	E $\angle 1$ and $\angle 2$
F $a^2 + b^2 = c^2$	G $\angle 1$ and $\angle 2$	H $\angle 1$ and $\angle 2$	I $a^2 + b^2 = c^2$	J $\angle 1$ and $\angle 2$
K line m	L $\angle 1$ and $\angle 2$	M Reflection	N Dilation	O $\angle 1$ and $\angle 2$

Rotation

Translation

Pythagorean Theorem

180° Supplementary Angles

Transversal

Alternate Interior Angles

Consecutive Interior Angles

Reflection

Dilation

90° Complementary Angles

Vertical Angles

Corresponding Angles

Alternate Exterior Angles

Triangle Sum Theorem

N

C

I

D

J

E

G

M

F

H

L

O

B

A