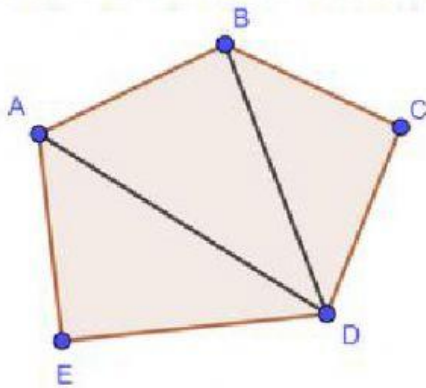


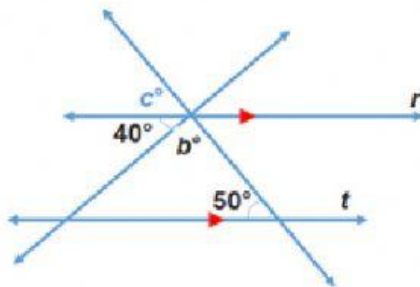
1-

What is the sum of the interior angle measures of pentagon  $ABCDE$ ?



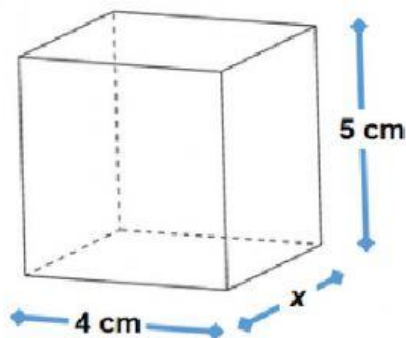
2-

Lines  $r$  and  $t$  are parallel. What is the value of  $b$ ?



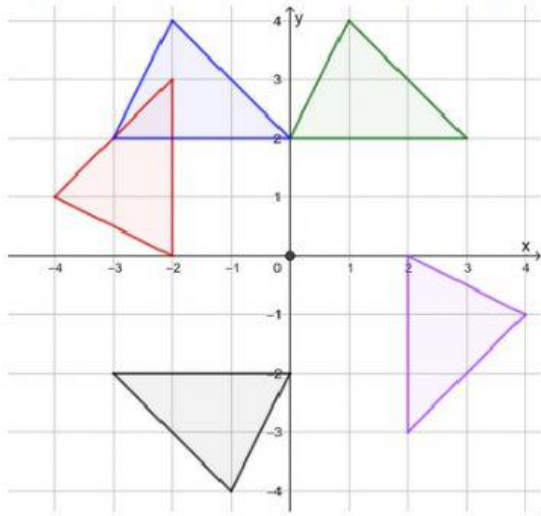
3-

The volume of the rectangular prism below is  $60 \text{ cm}^3$ . Find the value of  $x$ .



4-

Which of the figures shows a rotation of the green triangle 90° clockwise about the origin?



a ☐ purple

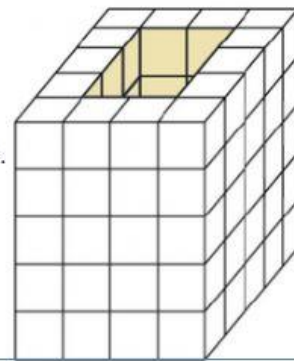
b ☐ gray

c ☐ red

d ☐ blue

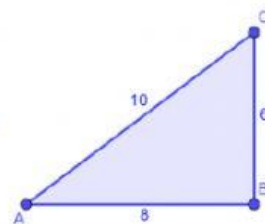
5-

The figure on the right shows a rectangular prism made out of cubes. There is a hole that goes all the way to the bottom of the prism. How many cubes are needed to fill the hole inside of the prism?



6-

Which of the following is used to show that triangle ABC is a right triangle?



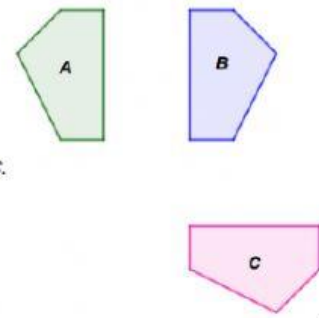
a ☐  $6 + 8 > 10$

b ☐  $6 + 8 = 10 + 4$

c ☐  $6^2 + 8^2 = 10^2$

d ☐  $(6 + 8)^2 = 14^2$

7-



Describe the sequence of transformations that maps figure A onto figure B then onto figure C.

- a ☐ Reflection then rotation  $90^\circ$  ( $\frac{1}{4}$  turn) clockwise
- b ☐ Translation then rotation  $90^\circ$  ( $\frac{1}{4}$  turn) clockwise
- c ☐ Reflection then rotation  $180^\circ$  ( $\frac{1}{2}$  turn)
- d ☐ Reflection then translation

8-

The table on the right shows the length of the shadow of 4 plants with different heights at the same time of the day.

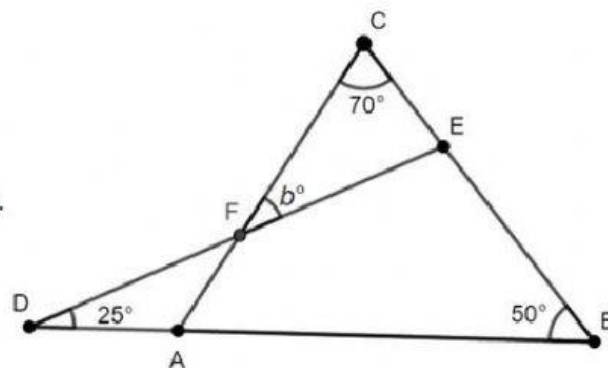
Find the height of the plant that casts a shadow of 90 centimeters at the same time of the day.

Height(cm)	Shadow(cm)
20	30
30	45
40	60

- a ☐ 70 cm
- b ☐ 60 cm
- c ☐ 80 cm
- d ☐ 72 cm

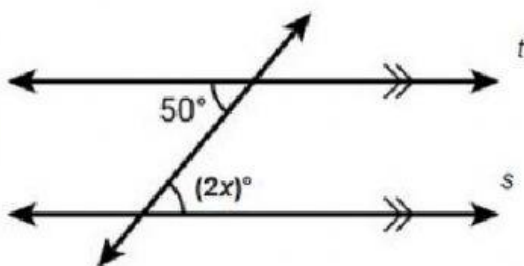
9-

Find the value of  $b$ .



10-

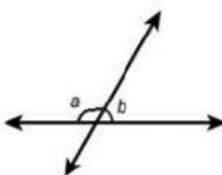
Lines  $t$  and  $s$  are parallel.  
Find the value of  $x$ .



11-

Complete the statement.

Angles  $a$  and  $b$  form a linear pair so they are \_\_\_\_\_

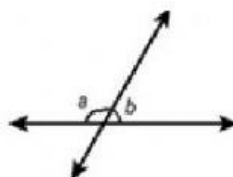


- a ☐ congruent
- b ☐ non-adjacent
- c ☐ complementary
- d ☐ supplementary

12-

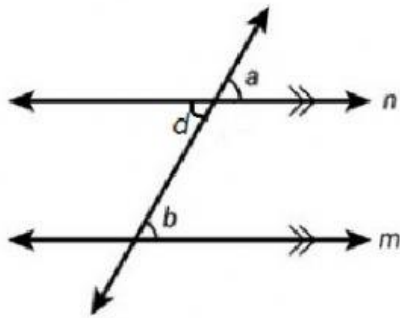
Complete the statement.

Angles  $a$  and  $b$  form a linear pair so they are \_\_\_\_\_



- a ☐ congruent
- b ☐ non-adjacent
- c ☐ complementary
- d ☐ supplementary

13-



Two parallel lines  $m$  and  $n$  are cut by a transversal.

Find the reason for the statement:

$$\angle d \cong \angle a$$

- a ☐ Alternate exterior angles theorem
- b ☐ Corresponding angles postulate
- c ☐ Vertical angles theorem
- d ☐ Alternate interior angles theorem

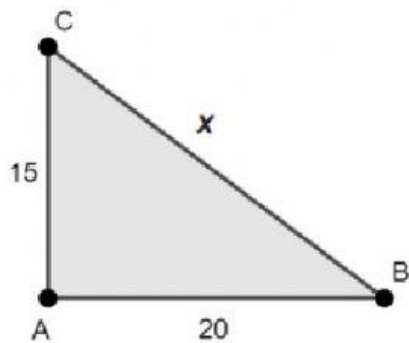
14-

Find the measure of an exterior angle of a regular hexagon.

- a ☐  $360^\circ$
- b ☐  $120^\circ$
- c ☐  $180^\circ$
- d ☐  $60^\circ$

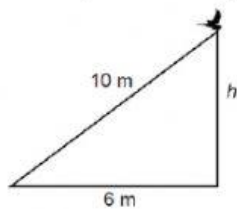
15-

Triangle  $ABC$  is right at  $A$ . Find the value of  $x$ .



16-

The triangle shown is a right triangle. Write an equation that can be used to find the height of the bird. Then solve.



17-

Use the distance formula to find the distance between  $A(4, -3)$  and  $B(-2, 3)$ . Round to the nearest tenth if necessary.

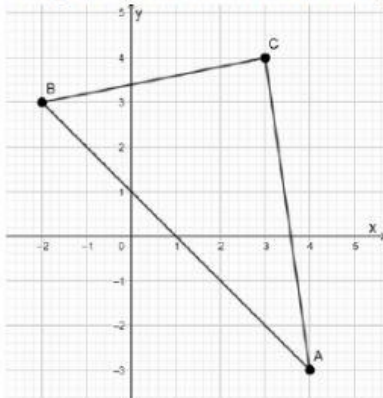
- a ☐ 4.9
- b ☐ 6.0
- c ☐ 12.0
- d ☐ 8.5

18-

$\triangle ABC \cong \triangle DEF$ , and  $m\angle B = 50^\circ$ . Find the measure of  $\angle E$ .

19-

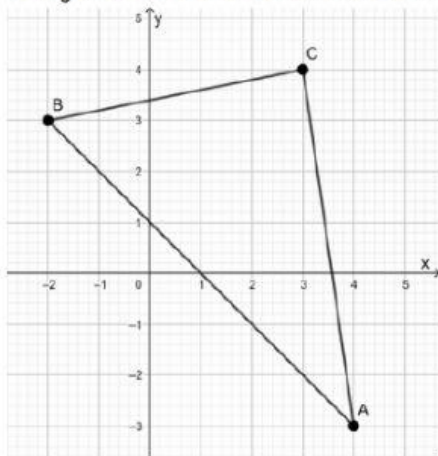
Triangle  $ABC$  is translated 3 units to the right and 5 units down to obtain triangle  $A'B'C'$ . Find the coordinates of  $A'$ .



- a ☐ (7, -8)
- b ☐ (4, 2)
- c ☐ (4, -8)
- d ☐ (7, 2)

20-

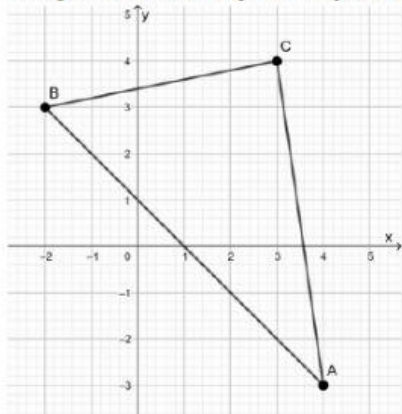
Triangle  $ABC$  is reflected over the  $x$ -axis to obtain triangle  $A'B'C'$ . Find the coordinates of  $B'$ .



- a ☐ (2, -3)
- b ☐ (-2, -3)
- c ☐ (2, 3)
- d ☐ (-2, 3)

21-

Triangle  $A'B'C'$  is the image of triangle  $ABC$  after a dilation with a scale factor of 3. Find the coordinates of  $C'$ .



- a ☐ (9, 12)
- b ☐ (-3, -4)
- c ☐ (6, 7)
- d ☐ (-3, 4)

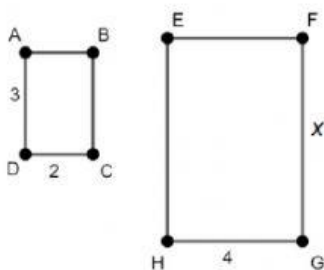
22-

$\triangle ABC \cong \triangle DEF$ ,  $AB = 6$ ,  $BC = 5$  and  $AC = 10$ . Find  $DE$ .

- a ☐ 6
- b ☐ 12
- c ☐ 10
- d ☐ 5

23-

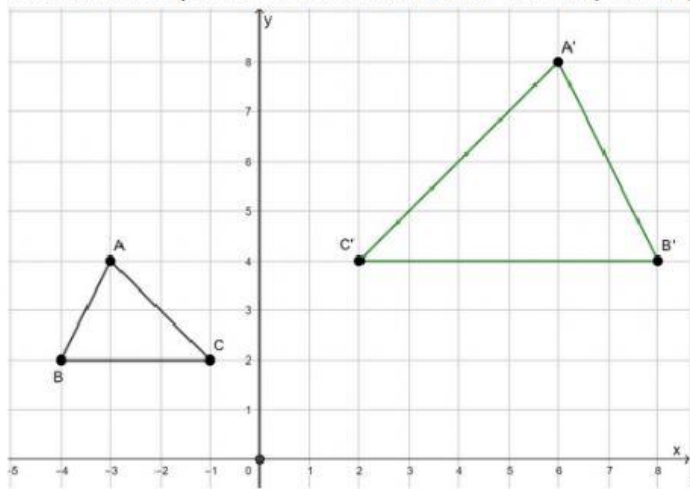
Rectangle  $ABCD$  is similar to rectangle  $EFGH$ . Find the value of  $x$ .





24-

Describe a sequence of transformations that maps triangle  $ABC$  onto triangle  $A'B'C'$ .



- a ☐ translation then dilation
- b ☐ Translation then rotation
- c ☐ Reflection over the  $x$ -axis then rotation
- d ☐ Reflection over the  $y$ -axis then dilation

25-

Find the numeric value of the slope shown by the slope triangle.

