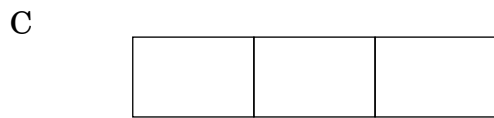
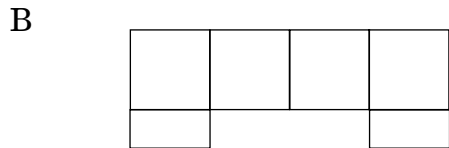
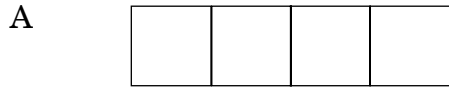
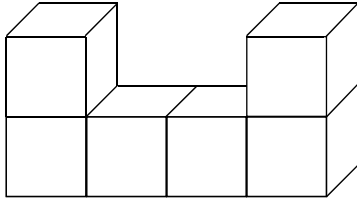
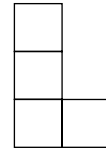


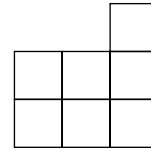
1. How would this block model look from the top?



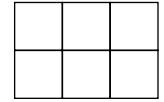
2. What is the **least** number of cubes needed to form a three-dimensional figure with the given left side, front, and top views?



left side



front



top

A 4 cubes

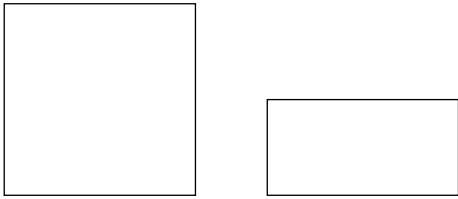
B 6 cubes

C 7 cubes

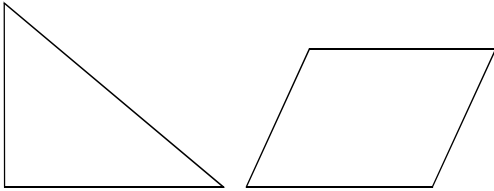
D 10 cubes

3. Which plane figures are similar?

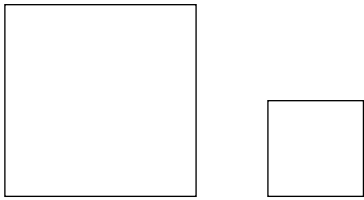
A



B



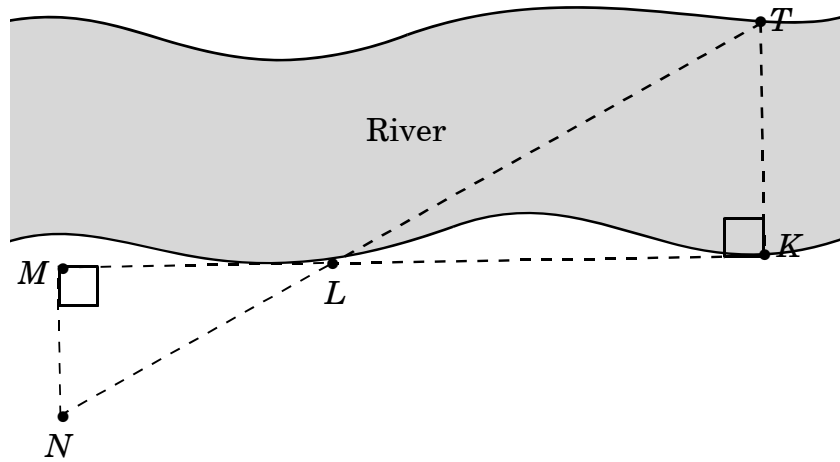
C



D



4. Sara used similar triangles to find a relationship between the width of the river and the distance MN . $\triangle LMN$ is similar to $\triangle LKT$. The measure of angle N is 62° .



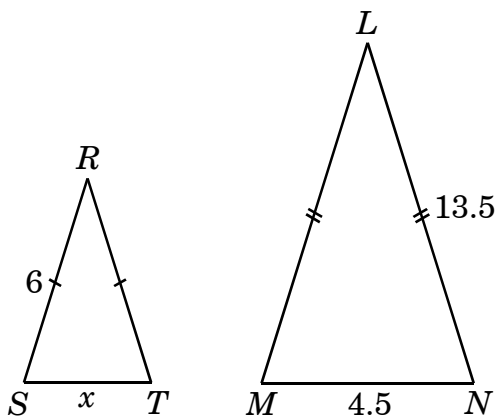
Which angle has the same measure as angle N ?

- A $\angle LKT$
- B $\angle NLM$
- C $\angle NML$
- D $\angle LTK$

5. $\triangle STU \sim \triangle XYZ$. Which statement must be true?

- A The measure of $\angle STU$ is half the measure of $\angle XYZ$.
- B The measure of $\angle STU$ is equal to the measure of $\angle XYZ$.
- C The measure of $\angle STU$ is double the measure of $\angle XYZ$.
- D The measure of $\angle STU$ is complementary to the measure of $\angle XYZ$.

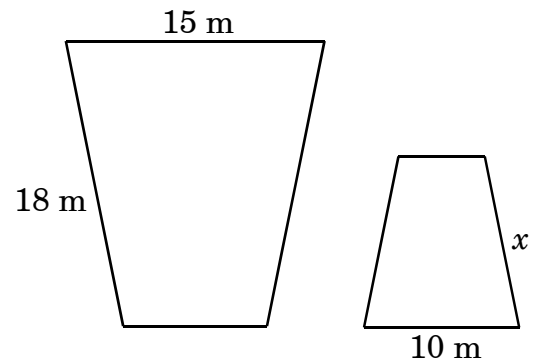
6. $\triangle RST$ is an isosceles triangle with $\overline{RS} \cong \overline{RT}$.



If $\triangle RST$ is similar to $\triangle LMN$, what is the value of x ?

- A 2
- B 3
- C 4
- D 5

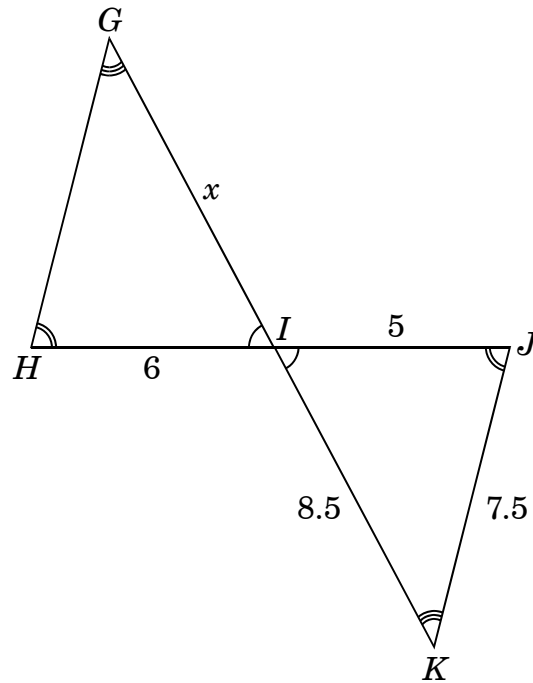
7. The two polygons below are similar.



What is the value of x ?

- A 12 m
- B 13 m
- C 18 m
- D 27 m

8. In the figure below, \overline{GH} is parallel to \overline{JK} , so the two triangles are similar.



What is the value of x ?

- A 4.0
- B 5.3
- C 9.0
- D 10.2

End of Goal 3 Sample Items

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Answers to EOG Grade 7 Math Sample Items

Goal 3

1. Objective 3.01

Using three-dimensional figures: A) Identify, describe, and draw from various views (top, side, front, corner). B) Build from various views. C) Describe cross-sectional views.

Thinking Skill: Analyzing

Correct Answer: A

2. Objective 3.01

Using three-dimensional figures: A) Identify, describe, and draw from various views (top, side, front, corner). B) Build from various views. C) Describe cross-sectional views.

Thinking Skill: Analyzing

Correct Answer: D

3. Objective 3.02

Identify, define, and describe similar and congruent polygons with respect to angle measures, length of sides, and proportionality of sides.

Thinking Skill: Applying

Correct Answer: C

4. Objective 3.02

Identify, define, and describe similar and congruent polygons with respect to angle measures, length of sides, and proportionality of sides.

Thinking Skill: Analyzing

Correct Answer: D

5. Objective 3.02

Identify, define, and describe similar and congruent polygons with respect to angle measures, length of sides, and proportionality of sides.

Thinking Skill: Analyzing

Correct Answer: B

6. Objective 3.03

Use scaling and proportional reasoning to solve problems related to similar and congruent polygons.

Thinking Skill: Applying

Correct Answer: A

7. Objective 3.03

Use scaling and proportional reasoning to solve problems related to similar and congruent polygons.

Thinking Skill: Applying

Correct Answer: A

8. Objective 3.03

Use scaling and proportional reasoning to solve problems related to similar and congruent polygons.

Thinking Skill: Applying

Correct Answer: D