

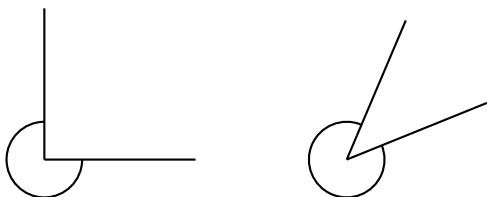
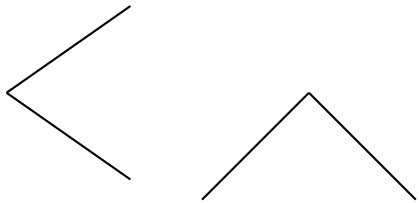
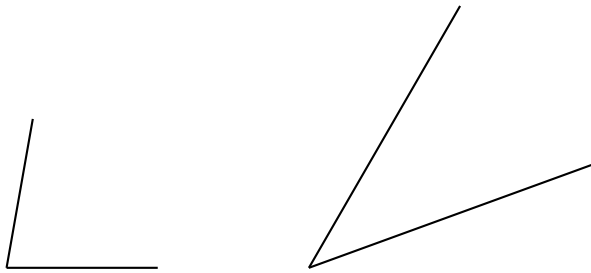
NAME: _____

1. What is an angle? Try to explain with words.

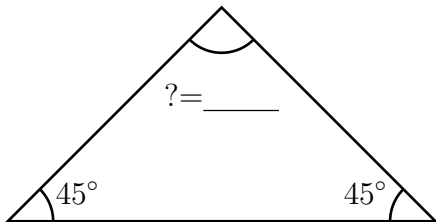
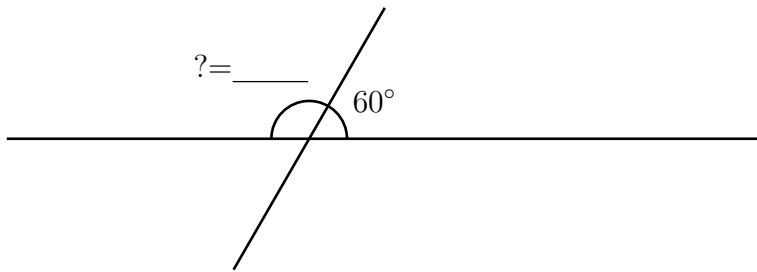
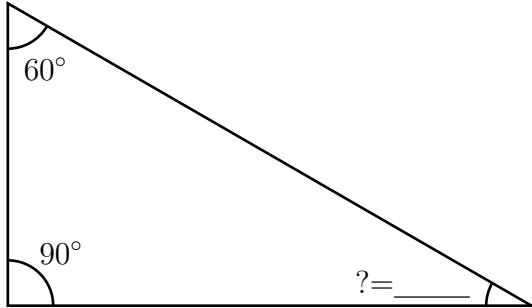
2. Draw an angle

3. Draw a bigger angle. Explain why it is bigger.

4. Which angle is bigger in each pair? Circle the one you think is biggest.



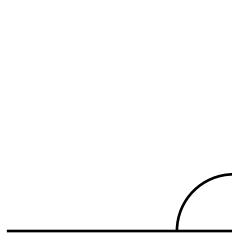
5. How big is the missing angle measurement? Write the answer on the line.



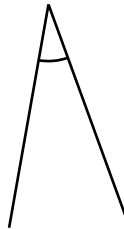
How did you find the answer?

6. Estimate the angles

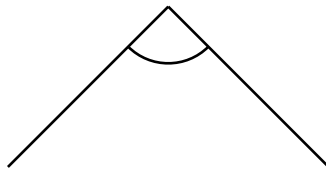
- ☐ 30°
- ☐ 60°
- ☐ 90°
- ☐ 120°
- ☐ 180°
- ☐ 270°
- ☐ 330°



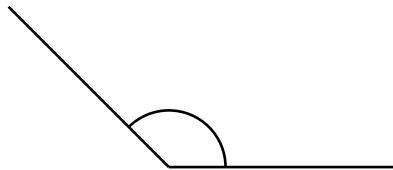
- ☐ 30°
- ☐ 60°
- ☐ 90°
- ☐ 120°
- ☐ 180°
- ☐ 270°
- ☐ 330°



Write an estimate



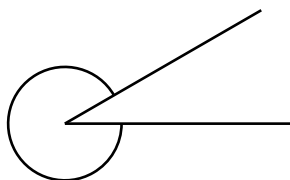
Write an estimate



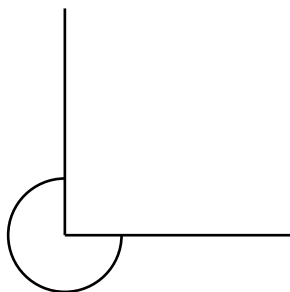
How did you estimate this angle?

7. Estimate the angles

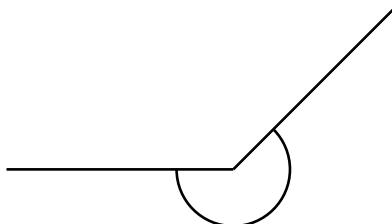
- ☐ 30°
- ☐ 60°
- ☐ 90°
- ☐ 120°
- ☐ 180°
- ☐ 270°
- ☐ 330°



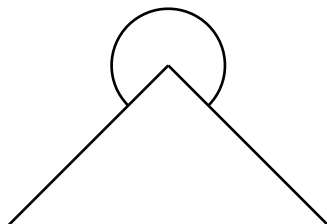
- ☐ 30°
- ☐ 60°
- ☐ 90°
- ☐ 120°
- ☐ 180°
- ☐ 270°
- ☐ 330°



Write an estimate

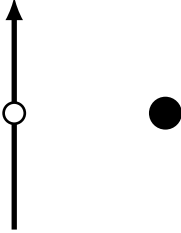
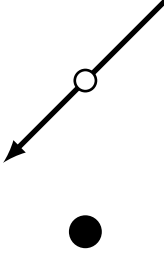
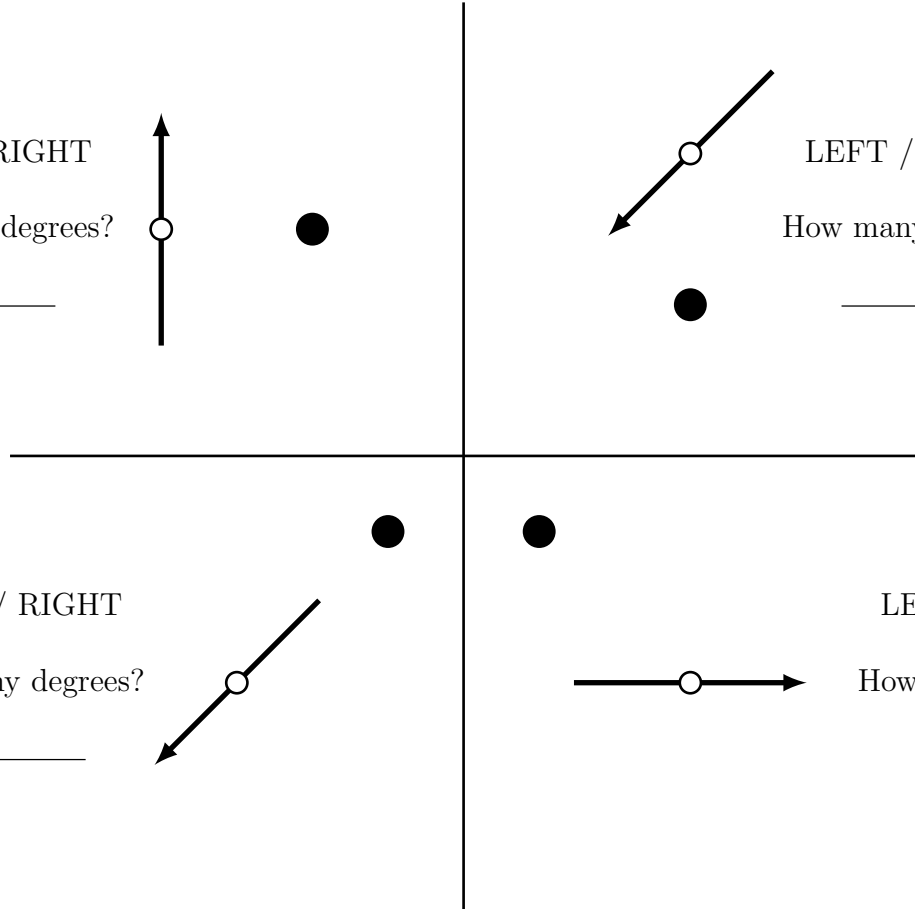
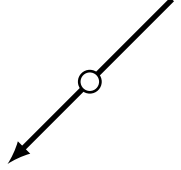
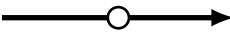


Write an estimate



How did you estimate this angle?

8. How many degrees and in which direction (right or left) should you turn the spinner arrow to aim it directly at the center of the black dot? Circle the direction you choose and write how many degrees on the line.

<p>LEFT / RIGHT</p> <p>How many degrees?</p> <p>_____</p> 	<p>LEFT / RIGHT</p> <p>How many degrees?</p> <p>_____</p> 
	
<p>LEFT / RIGHT</p> <p>How many degrees?</p> <p>_____</p> 	<p>LEFT / RIGHT</p> <p>How many degrees?</p> <p>_____</p> 

How did you think when you solved these tasks?

9. A robot turns 30 degrees every time it turns. How many turns must the robot make before it is facing in the same direction as it was when it started? How did you get your answer?
10. A robot turns 40 degrees left, then it turns 20 degrees right and then 30 degrees left. How far and in what direction has the robot turned in total from where it started? How did you get your answer?
11. Do you think you can learn about angles and degrees using robotics?

In the questions below mark the box that matches how you feel.

- - means very little.

+ + means very much.

12. How interesting was the activity?

☐ - -

☐ -

☐ 0

☐ +

☐ + +

13. How motivated did you feel during the activity sessions?

☐ - -

☐ -

☐ 0

☐ +

☐ + +

14. How entertaining was the activity?

☐ - -

☐ -

☐ 0

☐ +

☐ + +

15. Do you think robots can make mathematics more interesting?

☐ - -

☐ -

☐ 0

☐ +

☐ + +

16. Throughout the activity, how much did you cooperate with your teammates?

☐ - -

☐ -

☐ 0

☐ +

☐ + +

17. Do you think imagining a robot turning can help you when working with angles?

☐ - -

☐ -

☐ 0

☐ +

☐ + +