

Connect

Right angles and straight angles are all around us.

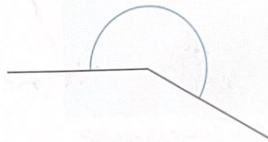
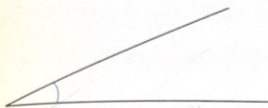


We name angles for the way they relate to a right angle or a straight angle.

An **acute angle** is less than a right angle.

An **obtuse angle** is greater than a right angle, but less than a straight angle.

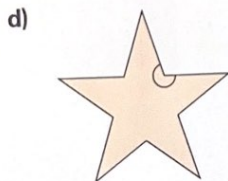
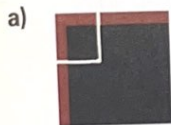
A **reflex angle** is greater than a straight angle.



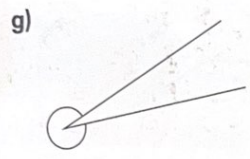
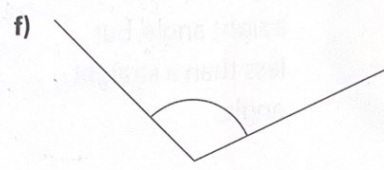
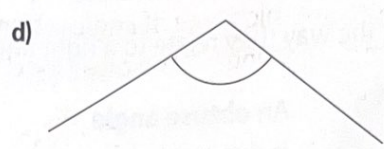
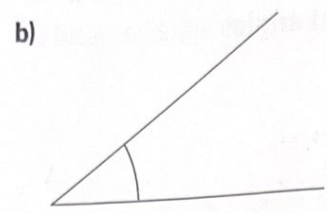
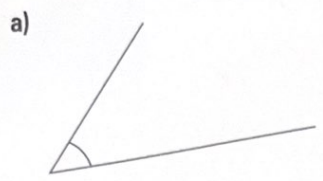
Practice

Use a piece of paper with a square corner when it helps.

1. Which angle is an acute angle? A right angle? An obtuse angle? A straight angle? A reflex angle?



2. Name each angle as a right angle, an acute angle, an obtuse angle, a straight angle, or a reflex angle. How did you find out?



3. Your teacher will give you a large copy of these flags.

List the flags with:

- a) a right angle
- b) an acute angle
- c) an obtuse angle
- d) a reflex angle

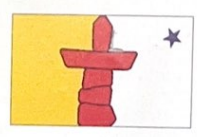
On each flag, label an example of each type of angle you find.



British Columbia



Saskatchewan



Nunavut



Canada

4. Draw a line segment on grid paper.
Visualize rotating the line segment about one of its end points.
Which type of angle is formed by each rotation?

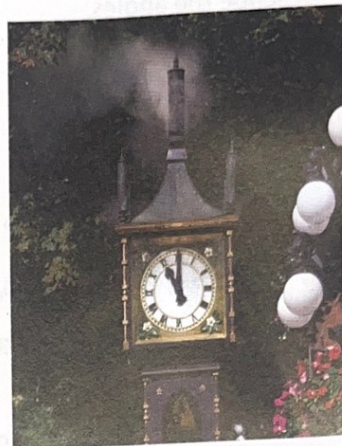
- a) a $\frac{1}{2}$ turn
b) a $\frac{1}{4}$ turn clockwise
c) a $\frac{3}{4}$ turn counterclockwise
Use tracing paper to check.

5. a) For each time below, which type of angle is formed by the hour hand and minute hand on a clock?
How did you find out?

- i) 2:15
ii) 3:35
iii) 9:00
iv) 12:30
v) 1:45



- b) Would the size of each angle change if the minute hand was shorter?
Justify your answer.



Steam Clock, Gastown, Vancouver

6. Find 5 angles in your classroom.
Try to find one example of a right angle, an acute angle, an obtuse angle, a straight angle, and a reflex angle.
Sketch each angle.
Write where you found each angle, then label the angle with its name.
How did you decide how to name each angle?
Which angle was easiest to find?
Why do you think so?



7. Use square dot paper.
How many different angles can you draw on a 3-by-3 grid?
Classify the angles.
Show your work.



Reflect

When you see an angle, how can you tell which type of angle it is?
How many ways can you find out?
Use words and pictures to explain.