Unit 7, Lesson 14

Reasoning about Angles (Part 1)

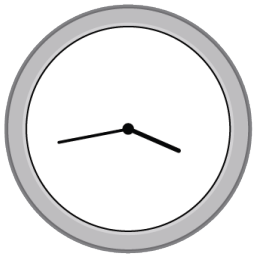
Let's find the size of an angle on the clock.

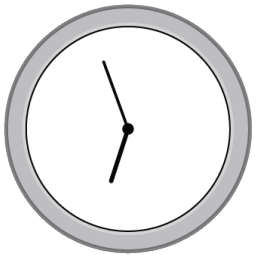
Warm-up

Which Three Go Together: Time after Time

Which 3 go together?

A 

B 

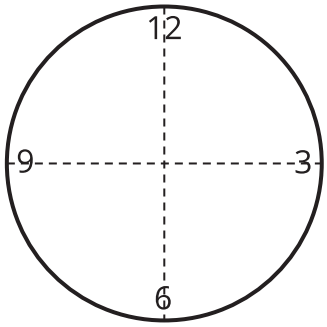
C 

D 

Activity 1

Draw a Clock

Kiran is drawing a clock. He draws a pair of perpendicular lines to find the placement of the numbers 3, 6, 9, and 12 around the circle.



1. How many degrees is each angle? Explain how you know.

2. Help Kiran find the exact placement of the numbers “1” and “2” on the clock.
   a. How many new lines does he need to draw?
   b. Describe the angles that should be formed between the 2 lines he has already drawn and the new lines.
   c. Draw lines precisely, and place the numbers “1” and “2” on the drawing.
3. Measure and draw as many lines as needed to complete the clock drawing. Make sure each number is placed in the correct location on the clock.

Activity 2

Tick Tock

1. The hour and minute hands form an angle at each of these times. How many degrees is each angle?

   a. 6 o'clock

   b. 8 o'clock

   c. 9 o'clock

   d. 11 o'clock

   e. 12 o'clock

2. How many degrees has the minute hand turned when it moves from 2:00 to 2:05?

   What about from 2:05 to 2:30? Explain how you know.

3. The minute hand of the clock is vertical at 7 p.m. Sometime later, it makes an angle that is 120° from where it was at 7 p.m. What time is it?

4. How many degrees does the minute hand turn in:

   a. 10 minutes?

   b. 1 minute?

   c. 4 minutes?