

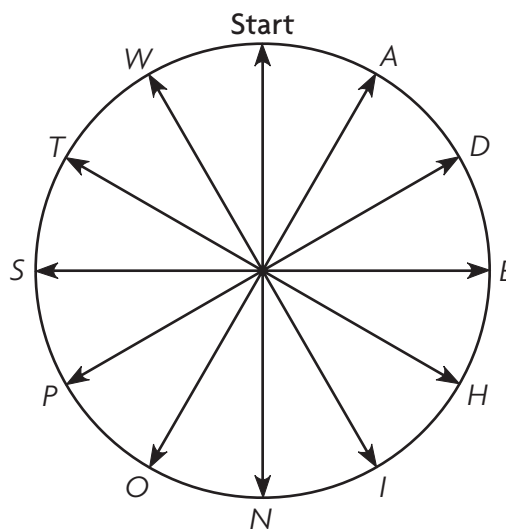
Name _____

A Turning Riddle

What is the best way to eat soup?

Use the circle below. For each exercise, start at the top of the circle, make the indicated turn, and write the letter on the blank line. When you have finished, read the letters from top to bottom to answer the riddle.

- | | |
|---|------------------|
| 1. $\frac{1}{12}$ turn counterclockwise | <u> W </u> |
| 2. $\frac{5}{12}$ turn clockwise | <u> I </u> |
| 3. $\frac{1}{6}$ turn counterclockwise | <u> T </u> |
| 4. $\frac{1}{3}$ turn clockwise | <u> H </u> |
| 5. $\frac{1}{12}$ turn clockwise | <u> A </u> |
| 6. $\frac{1}{4}$ turn counterclockwise | <u> S </u> |
| 7. $\frac{8}{12}$ turn clockwise | <u> P </u> |
| 8. $\frac{7}{12}$ turn clockwise | <u> O </u> |
| 9. $\frac{5}{12}$ turn counterclockwise | <u> O </u> |
| 10. $\frac{1}{2}$ turn counterclockwise | <u> N </u> |



11. **Write Math** Make up your own riddle and answer circle. Exchange it with a classmate and solve.

Check students' work.

Name _____

Time by Degrees

Use the hands of a clock to answer each question.

1. How many degrees does the minute hand turn to get from 12:00 to 12:05?

30°

2. How many degrees does the minute hand turn to get from 12:00 to 12:20?

120°

3. How many degrees does the hour hand turn in one hour?

30°

4. How many degrees does the hour hand turn to get from 12:00 to 12:20?

10°

5. What is the measure in degrees of the angle formed by the hands of a clock when the time is 3:00?

90° or 270°

6. What is the degree measure of the angle formed by the hands of a clock when the time is 12:00?

0° or 360°

7. What is the degree measure of the angle formed by the hands of a clock when the time is 9:00?

270° or 90°

8. What is the measure in degrees of the angle formed by the hands of a clock when the time is 6:00?

180°

9. **Stretch Your Thinking** What is the degree measure of the angle formed by the hands of a clock when the time is 3:30?

75° or 285°

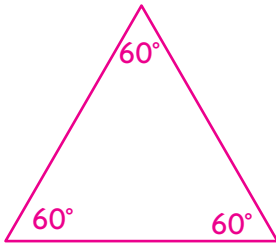
Name _____

Drawing Triangles

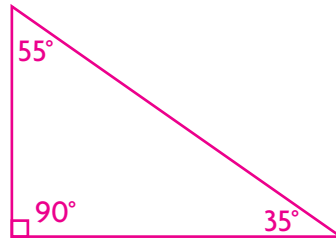
For Exercises 1–4, draw and label a triangle with the given angle measures.

Possible triangles are shown.

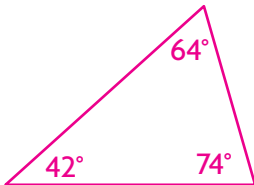
1. $60^\circ, 60^\circ, 60^\circ$



2. $90^\circ, 35^\circ, 55^\circ$



3. $42^\circ, 64^\circ, 74^\circ$



4. $118^\circ, 31^\circ, 31^\circ$



5. **Stretch Your Thinking** Compare your triangles with those of several classmates. What do you notice?

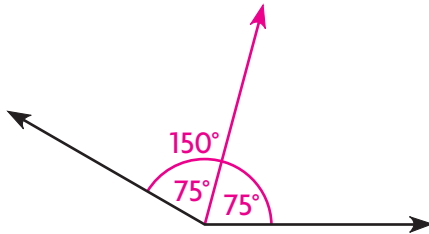
Possible answer: the triangles are the same shape but have different sizes and orientations.

Name _____

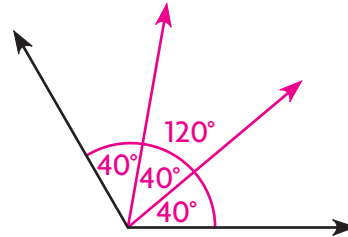
Degrees of Separation

Use a protractor. For each exercise, measure and label the angle. Then separate the angle as instructed and label the measures of its parts.

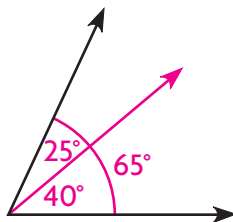
1. Separate the angle into two equal angles.



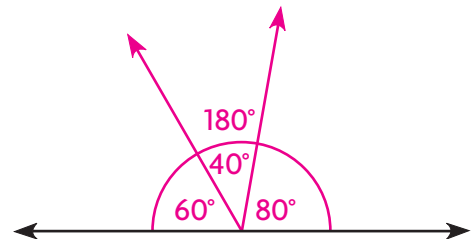
2. Separate the angle into three equal angles.



3. Separate the angle into two angles such that one angle is 15° greater than the other.



4. Separate the angle into three angles such that the greatest angle is 2 times as large as the smallest angle. The greatest angle also measures 20° more than the third angle.



Possible drawings are given in 3–4.

5. **Write Math** Describe how you used a protractor to complete the exercises.

Possible answer: first, I used the protractor to
measure the given angle. Then, I used it to draw the
angles once I found the correct measures.

Name _____

Unknown Measures

In Exercises 1–4, three angles join to form a straight angle.
Use the information given to find the measure of each angle.

1. One angle is a right angle. Give three pairs of possible measures for the other two angles.
2. One angle measures 40° . The other two angles have the same measure. What is the measure of each angle?

Possible answers: 45°

and 45° , 60° and 30° , and

70° and 20°

40° ; 70° ; 70°

3. All three angles have the same measure. What is the measure of each angle?
4. One angle measures 30° . The measure of the second angle is 2 times as large as the measure of the third angle. What are the measures of the other two angles?

60°

100° and 50°

5. **Stretch Your Thinking** Draw any two triangles and measure the angles in each. Find the sum of the angle measures. Look back at the angle measures you found in Exercises 1–4. Can you draw a triangle for each set? **Explain.**

Check students' drawings. Possible answer: the angle sum is 180° , which is the measure of a straight angle.

So, you can use each set to draw a triangle.