

# Activity 11.1

## Measurements and Conversions

Name \_\_\_\_\_ Date \_\_\_\_\_ Hour \_\_\_\_\_

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### *Student Materials*

Measurements and Conversions

### *Directions*

Convert the following problems. Use the equivalency chart in your book.

- 5 miles = \_\_\_\_\_ feet
- 4 hectares = \_\_\_\_\_ acres
- 13 feet = \_\_\_\_\_ inches
- 192 chains = \_\_\_\_\_ feet
- 3 acres = \_\_\_\_\_ ft.<sup>2</sup>
- 17 rods = \_\_\_\_\_ feet
- 5,400 links = \_\_\_\_\_ feet
- 1,920 rods = \_\_\_\_\_ miles
- 33 feet = \_\_\_\_\_ yards
- 28,160 yards = \_\_\_\_\_ miles
- Don purchased  $\frac{1}{2}$  mile of road frontage. How many feet of frontage did he purchase?  
\_\_\_\_\_
- How many meters are in a 15-foot wheat drill? \_\_\_\_\_
- If you own 80 acres of land, how many feet squared do you own?  
\_\_\_\_\_
- How many hectares are in 10 acres? \_\_\_\_\_
- If you travel 50 kilometers each day, how many miles do you travel?  
\_\_\_\_\_

# Activity 11.2

## Using Area Formulas

Name \_\_\_\_\_ Date \_\_\_\_\_ Hour \_\_\_\_\_

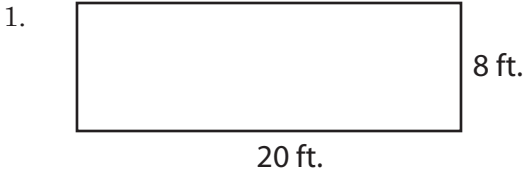
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**Student Materials**

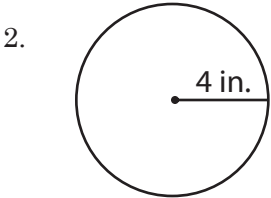
- Pencil
- Calculator

**Directions**

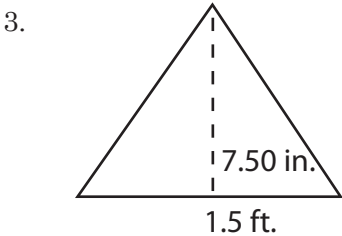
Complete the area calculations. Be sure to convert units when needed.



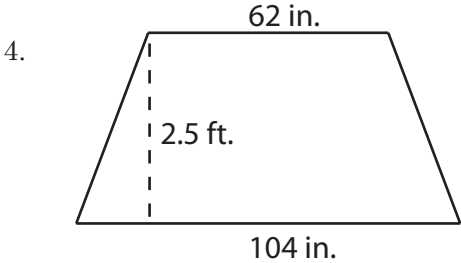
Area \_\_\_\_\_



Area \_\_\_\_\_



Area \_\_\_\_\_



Area \_\_\_\_\_

5. You have a rectangular hayfield measuring 700 feet by 500 feet. What is the area of the hayfield?
  
  
  
  
  
  
  
  
  
  
6. An irrigation rig sprays in a circular pattern. The diameter of the spray pattern is 209 feet. How much area does the rig spray?
  
  
  
  
  
  
  
  
  
  
7. Joan has a flower bed in the shape of a triangle with a base of 6 feet and a height of 8 feet. What is the area of Joan's flower bed?
  
  
  
  
  
  
  
  
  
  
8. Don needs a rectangular cattle pen with 468 sq. feet. He has two sides that are 26 feet long each. How long do the other sides need to be?
  
  
  
  
  
  
  
  
  
  
9. Cynthia needs to spray a circular area that is approximately 201 ft. squared. What is the diameter of the circle?
  
  
  
  
  
  
  
  
  
  
10. A handheld sprayer has a maximum triangular spray width of 24 inches and a length of 3 feet. What is the area covered by the sprayer?

# Activity 11.3 Legal Land Descriptions

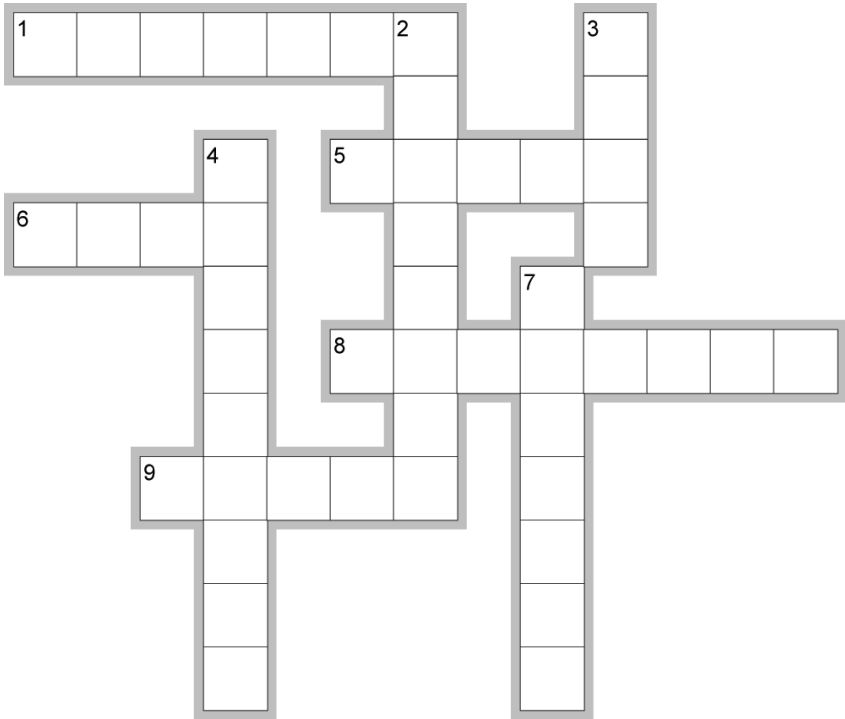
Name \_\_\_\_\_ Date \_\_\_\_\_ Hour \_\_\_\_\_

**Student Materials**

Pencil  
OSU Extension Fact Sheet F-9407

**Directions**

Complete the crossword and answer the questions using the extension fact sheet provided.



EclipseCrossword.com

**Across** \_\_\_\_\_

1. The legal description for a farm is the same as this for an urban residence
5. There are 640 of these in a section
6. Number of principal meridians in the U.S.; thirty-\_\_\_\_\_
8. The rectangular survey system was established to prevent a recurrence of \_\_\_\_\_ problems.
9. A Congressional township is 36 \_\_\_\_\_ square.

**Down** \_\_\_\_\_

2. A township is divided into 36 \_\_\_\_\_.
3. Line that runs east and west
4. Meridian that runs north and south
7. Point where lines cross

10. What does the curvature of the earth cause in determining the number of acres in a section?

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11. How is the owner lots found along rivers determined?

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12. When two letters appear together such as SW or NE, what does that indicate?

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# Activity 11.4

## Find the Township

Name \_\_\_\_\_ Date \_\_\_\_\_ Hour \_\_\_\_\_

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***Student Materials***

Pencil

***Directions***

Using the Oklahoma map found on page 180 of your text, name the township in which each city is located.

- 1. Tahlequah \_\_\_\_\_
- 2. Anadarko \_\_\_\_\_
- 3. Medford \_\_\_\_\_
- 4. Guymon \_\_\_\_\_
- 5. Idabel \_\_\_\_\_
- 6. El Reno \_\_\_\_\_
- 7. Walters \_\_\_\_\_
- 8. Pauls Valley \_\_\_\_\_
- 9. Newkirk \_\_\_\_\_
- 10. Stillwater \_\_\_\_\_
- 11. Mangum \_\_\_\_\_
- 12. Marietta \_\_\_\_\_
- 13. Cherokee \_\_\_\_\_
- 14. Vinita \_\_\_\_\_
- 15. Sulphur \_\_\_\_\_

# Activity 11.5 Identifying Land Descriptions

Name \_\_\_\_\_ Date \_\_\_\_\_ Hour \_\_\_\_\_

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***Student Materials***

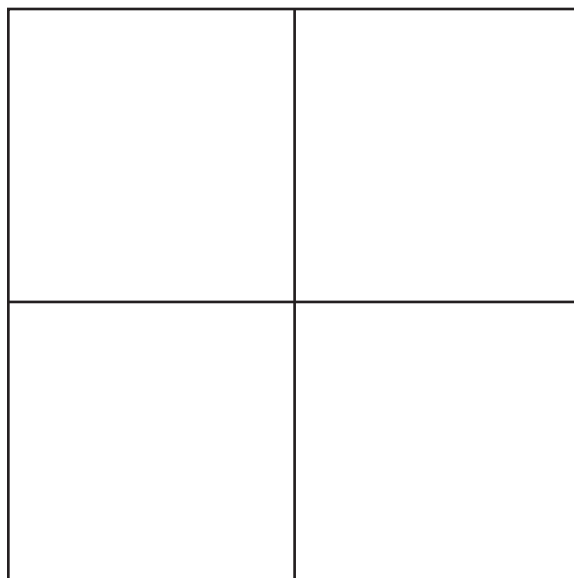
Pencil

***Directions***

For each legal land description, shade the section and label the area with the problem number. All are in the same section. Give the area in acres for each shaded portion.

Acres

- |                                |       |
|--------------------------------|-------|
| 1. W 1/2 SW 1/4                | _____ |
| 2. NW 1/4 SE 1/4 NW 1/4        | _____ |
| 3. SE 1/4 SE 1/4 NE 1/4 SW 1/4 | _____ |
| 4. S 1/2 NE 1/4                | _____ |
| 5. SE 1/4 NE 1/4 NE 1/4 SE 1/4 | _____ |
| 6. W 1/2 NW 1/4 NE 1/4         | _____ |
| 7. N 1/4 NW 1/4 SE 1/4         | _____ |
| 8. W 1/2 W 1/2 NW 1/4          | _____ |



# Activity 11.6

## Writing Legal Land Descriptions

Name \_\_\_\_\_ Date \_\_\_\_\_ Hour \_\_\_\_\_

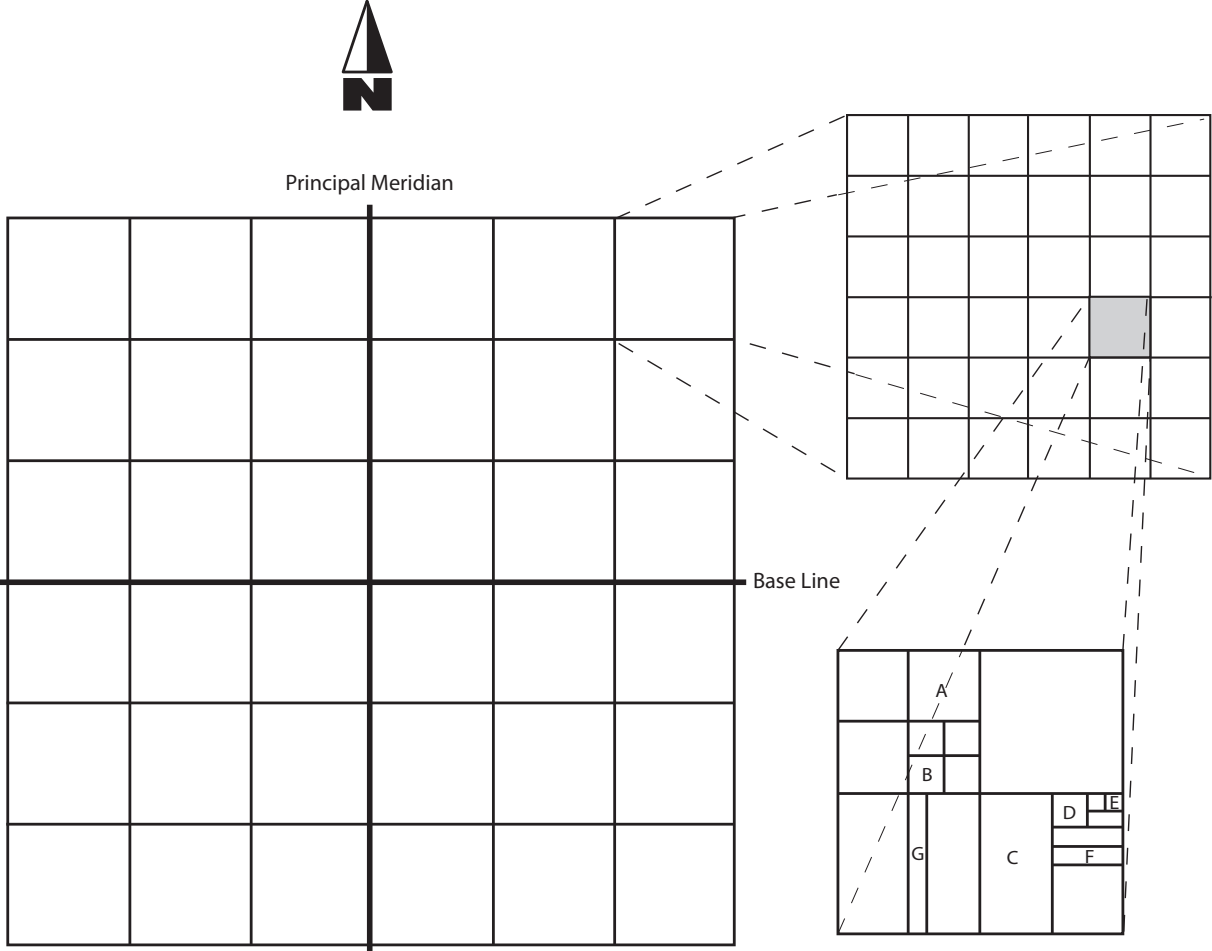
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**Student Materials**

Pencil

**Directions**

For the illustration given, write the legal land description including township and section and the total area for each lettered region.





Township \_\_\_\_\_ Range \_\_\_\_\_ Section \_\_\_\_\_

Description

Area

A \_\_\_\_\_

B \_\_\_\_\_

C \_\_\_\_\_

D \_\_\_\_\_

E \_\_\_\_\_

F \_\_\_\_\_

G \_\_\_\_\_