Name _____ Date _____ Class _____

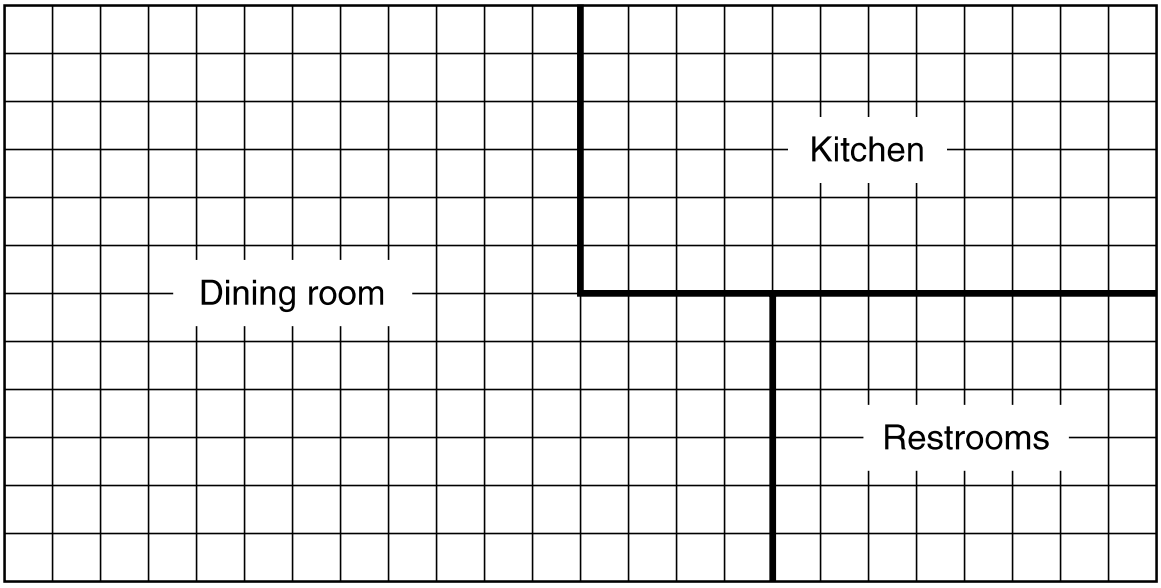
LESSON 7-7

Exploration Recording Sheet

Scale Drawings

A coffeehouse rents the floor space modeled by the figure below.

☐ = 1 ft^2



Count the number of squares to answer each question.

1. What is the actual area of the dining room? _____
2. What is the actual area of the kitchen? _____
3. What is the actual area of the restrooms? _____

Think and Discuss

4. **Show** a possible arrangement of square tables in the dining area if the tabletops each measured 2 ft by 2 ft.
5. **Discuss** real-world situations in which scale drawings are used.

_____

_____

Name _____ Date _____ Class _____

LESSON 7-7

Practice A

Scale Drawings

1. A drawing is 10 in. and the actual measurement is 20 ft. What is the ratio of the scale drawing to the actual drawing?

_____

2. A drawing is 25 cm and the actual measurement is 100 m. What is the ratio of the scale drawing to the actual drawing?

_____

The scale of a drawing is $\frac{1}{4}$ in. = 6 ft. Find the actual measurement

3. 4 in. _____

4. 3 in. _____

5. 1 in. _____

6. 2.75 in. _____

The scale is 1 cm = 25 m. Find the length each measurement would be on a scale drawing.

7. 50 m _____

8. 225 m _____

9. 375 m _____

10. 150 m _____

11. 175 m _____

12. 400 m _____

13. 250 m _____

14. 300 m _____

15. A square has a perimeter of 60 ft. A scale drawing of the figure is made with a scale of $\frac{1}{3}$ in. = 5 ft. What is the perimeter of the scale drawing of the figure? _____

16. A scale drawing has a scale of 1 in. = 10 ft. How long is a line on the drawing that represents an actual length of 22.5 ft? _____

17. On a map the distance between Charleston and Mt. Pleasant is 3.2 cm. The scale is 1 cm = 25 mi. What is the actual distance between these two towns? _____

Name _____ Date _____ Class _____

LESSON 7-7

Practice B

Scale Drawings

The scale of a drawing is $\frac{1}{4}$ in. = 15 ft. Find the actual measurement.

1. 9 in. _____

2. 12 in. _____

3. 14 in. _____

4. 15 in. _____

5. 18 in. _____

6. 20 in. _____

7. 16.5 in. _____

8. 10.8 in. _____

The scale is 2 cm = 25 m. Find the length each measurement would be on a scale drawing.

9. 150 m _____

10. 475 m _____

11. 350 m _____

12. 500 m _____

13. 625 m _____

14. 262.5 m _____

15. 387.5 m _____

16. 437.5 m _____

17. On a map the distance between Atlanta, Georgia, and Nashville, Tennessee, is 12.5 in. The scale is 1 in. = 20 mi. What is the actual distance between these two cities?

_____

18. Blueprints of a house are drawn to the scale of $\frac{1}{4}$ in. = 1 ft. A kitchen measures 3.5 in. by 5 in. on the blueprints. What is the actual size of the kitchen?

_____

19. A scale drawing has a scale of 1 in. = 10 ft. How long is a line on the drawing that represents an actual length of 47.5 ft?

_____

20. A scale drawing of a square with area 64 m^2 is made using a scale of 1 cm = 4 m. Find the dimensions of the scale drawing.

_____

Name _____ Date _____ Class _____

LESSON 7-7

Practice C

Scale Drawings

The scale of a drawing is 1 cm = 15 m. Find the actual measurement.

1. 25 cm _____

2. 41 cm _____

3. 54 cm _____

4. 37 cm _____

The scale is 1 in = 35 ft. Find the length each measurement would be on a scale drawing.

5. 245 ft _____

6. 490 ft _____

7. 385 ft _____

8. 262.5 ft _____

9. Maria's yard is 40 ft × 28 ft 9 in. She made a scale drawing of her yard that is 16 in. × 11.5 in. What scale factor did she use?

_____

10. Blueprints of a house are drawn to the scale of $\frac{1}{4}$ in. = 1 ft. A bedroom measures 4 in. by 5 in. on the blueprints. What is the actual size of the bedroom?

_____

11. A scale drawing of a square with area 144 ft^2 is made using a scale of 1 in. = 2 ft. Find the dimensions of the scale drawing.

_____

12. A map has a scale of 1 in. = 180 mi. If Mongolia is actually 2475 mi long and 1170 mi wide, what are its dimensions on the map?

_____

13. The area of a rectangle is 216 ft^2. The length of the rectangle is 18 ft. If a scale drawing of the figure has a scale of $\frac{1}{2}$ in. = 6 ft. What are dimensions of the rectangle on the scale drawing?

_____

14. A triangle has area of 768 ft^2 with a base of 48 ft. The scale drawing of the figure has scale of $\frac{1}{16}$ in. to 1 ft. What is the area of the scale drawing of the triangle?

_____

Room Blueprint Homework

1. Using the graph paper below, decide how much area one square will represent. Example: 1 square = 6 inches. Then, calculate the actual scale as a unitless ratio
2. Once the scale has been determined, map the layout of your room on the graph paper. Make sure dimensions and scale are appropriate.

ROOM SCALE: 1 square = _____ inches **Scale as a ratio:**