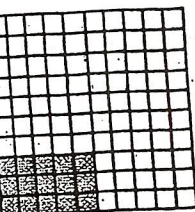
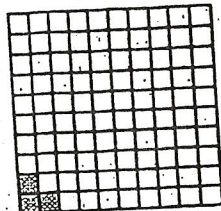




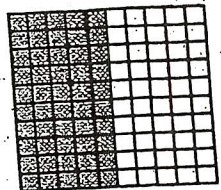
Write the fraction, decimal and percent represented by the shaded part of each square.



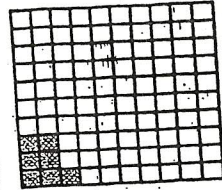
Fraction	Decimal	Percent
_____	_____	_____



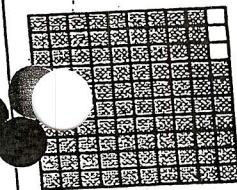
Fraction	Decimal	Percent
_____	_____	_____



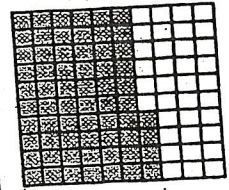
Fraction	Decimal	Percent
_____	_____	_____



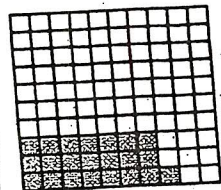
Fraction	Decimal	Percent
_____	_____	_____



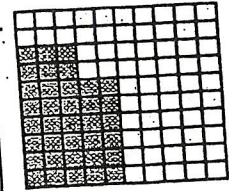
Fraction	Decimal	Percent
_____	_____	_____



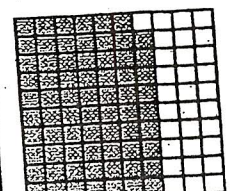
Fraction	Decimal	Percent
_____	_____	_____



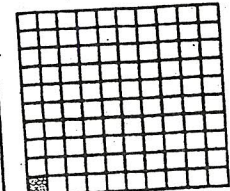
Fraction	Decimal	Percent
_____	_____	_____



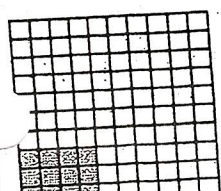
Fraction	Decimal	Percent
_____	_____	_____



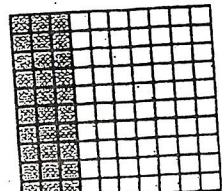
Fraction	Decimal	Percent
_____	_____	_____



Fraction	Decimal	Percent
_____	_____	_____



Fraction	Decimal	Percent
_____	_____	_____



Fraction	Decimal	Percent
_____	_____	_____



**ACTIVITY 103** Decimals on a Grid

Decimals can be shown on a grid. Each grid equals one whole. Each small square equals  $\frac{1}{100}$  or 0.01.

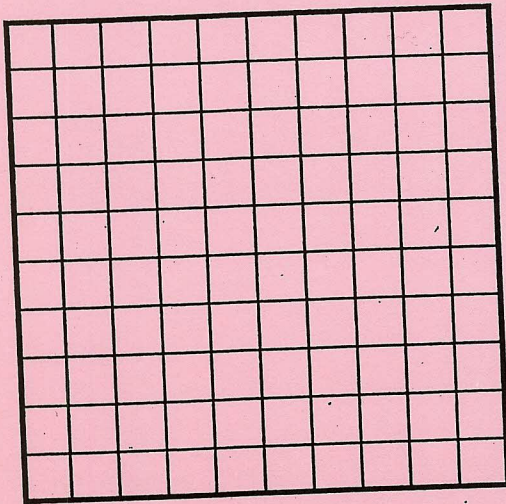
Shade in the right number of squares to show the decimals.

Name: \_\_\_\_\_

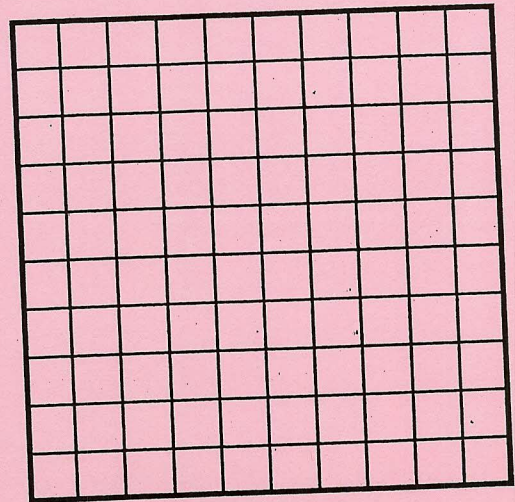
Date: \_\_\_\_\_

1. ~~0.75~~

$$\frac{3}{4}$$

2. ~~0.4~~

$$\frac{2}{5}$$

**ACTIVITY 103** Decimals on a Grid

Decimals can be shown on a grid. Each grid equals one whole. Each small square equals  $\frac{1}{100}$  or 0.01.

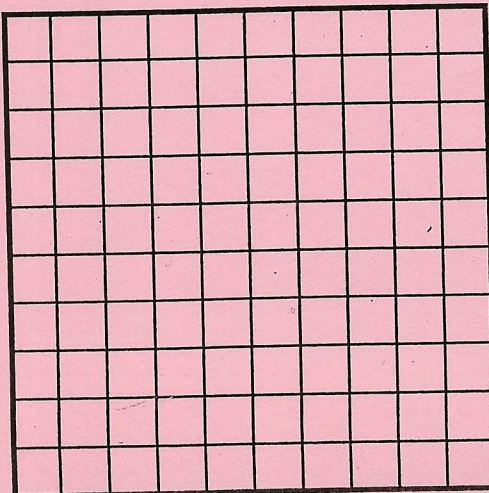
Shade in the right number of squares to show the decimals.

Name: \_\_\_\_\_

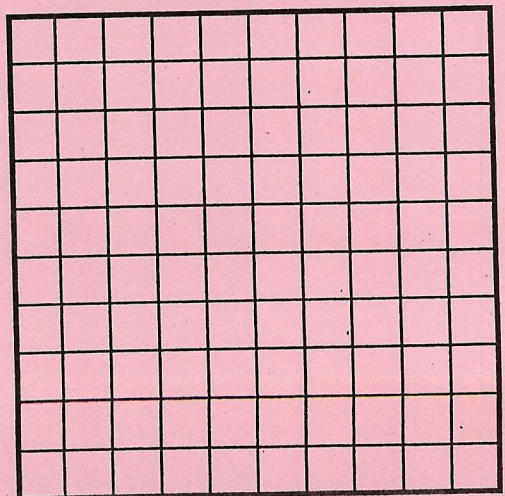
Date: \_\_\_\_\_

1. ~~0.30~~

$$0.50$$

2. ~~0.40~~

$$0.25$$



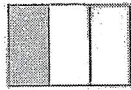


Name \_\_\_\_\_

Date \_\_\_\_\_

**SOL 6.1 – Equivalence Relationship between Fractions, Decimals and Percents**

6. What percent of the rectangle is shaded?



F 1%  
H 33.3%

G 13%  
J 40%

7. Which of the following statements is *true*?

A  $\frac{1}{2} = 0.05 = 50\%$

B  $\frac{1}{3} = 0.33 = 30\%$

C  $\frac{1}{4} = 0.25 = 20\%$

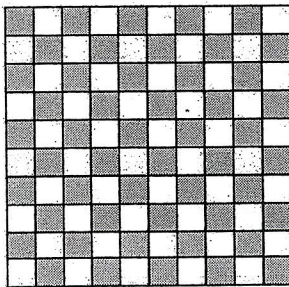
D  $\frac{1}{5} = 0.2 = 20\%$

8. The sales tax rate in Greenville County is 4.5%. Which is this rate written as a fraction in simplest form?

F 0.045  
H  $4\frac{5}{10}$

G 0.45  
J  $4\frac{1}{2}$

9. Which represents the part of the 10-by-10 grid that is shaded?



A 0.12  
C 0.75

B 0.5  
D 0.8

10. Which is the decimal equivalence for  $\frac{2}{25}$ ?

F 0.8  
H 0.08

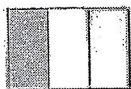
G 0.12  
J 0.012

Name \_\_\_\_\_

Date \_\_\_\_\_

**SOL 6.1 – Equivalence Relationship between Fractions, Decimals and Percents**

6. What percent of the rectangle is shaded?



F 1%

H 33.3%

G 13%

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7. Which of the following statements is *true*?

A  $\frac{1}{2} = 0.05 = 50\%$

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C  $\frac{1}{4} = 0.25 = 20\%$

D  $\frac{1}{5} = 0.2 = 20\%$

8. The sales tax rate in Greenville County is 4.5%. Which is this rate written as a fraction in simplest form?

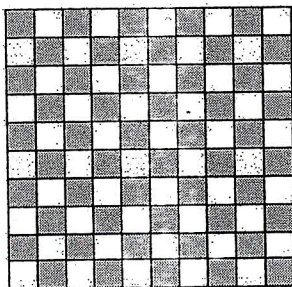
F 0.045

G 0.45

H  $4\frac{5}{10}$

J  $4\frac{1}{2}$

9. Which represents the part of the 10-by-10 grid that is shaded?



A 0.12

C 0.75

B 0.5

D 0.8

10. Which is the decimal equivalence for  $\frac{2}{25}$ ?

F 0.8

H 0.08

G 0.12

J 0.012



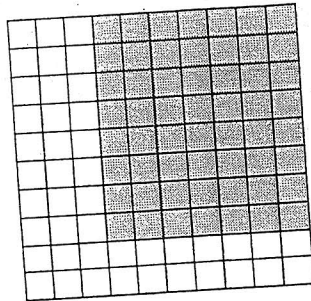
Name \_\_\_\_\_

Date \_\_\_\_\_

# Equivalence Relationship between Fractions, Decimals and Percents

## SOL 6.1

1. Which represents the part of the 10-by-10 grid that is shaded?



A  $\frac{2}{3}$

B  $\frac{3}{4}$

C  $\frac{14}{25}$

D  $\frac{7}{10}$

2. Which is equivalent to  $\frac{4}{5}$ ?

F 0.8%

H 80%

G 8%

J 800%

3. Which fraction has the same value as 0.2?

A  $\frac{1}{3}$

B  $\frac{1}{4}$

C  $\frac{1}{5}$

D  $\frac{1}{6}$

4. Which is equivalent to 0.125?

F 0.125%

H 12.5%

G 12%

J 125%

5. Which is equivalent to  $\frac{3}{8}$ ?

A 0.25

C 0.39

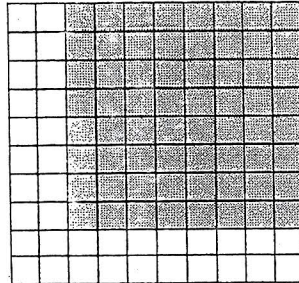
B 0.375

D 2.67

Name \_\_\_\_\_

Date \_\_\_\_\_

6. Which represents the part of the 10-by-10 grid that is shaded?



F 8%  
H 80%

G 64%  
J 90%

7. Amy correctly answered 18 out of 20 questions on her math test. What percent of the questions did she answer correctly?

A 10%  
C 80%

B 18%  
D 90%

8. What percent of the rectangle is shaded?



F 20%  
H 60%

G 40%  
J 80%

9. The winning candidate for SCA President received 65% of the votes. What fraction of the votes did he receive?

A  $\frac{11}{20}$

B  $\frac{9}{20}$

C  $\frac{13}{20}$

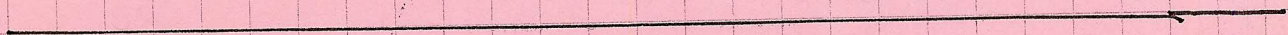
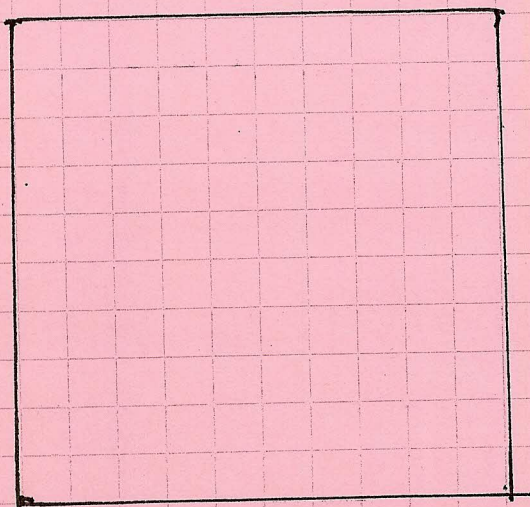
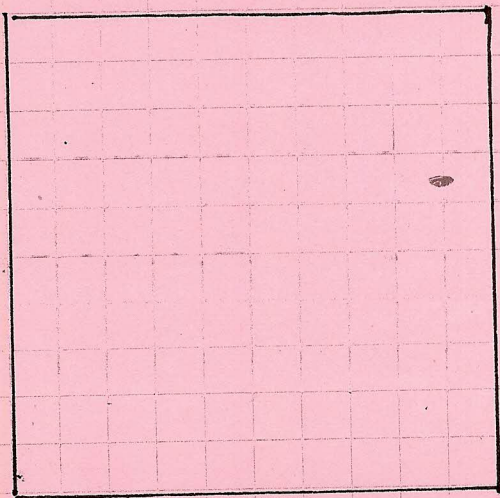
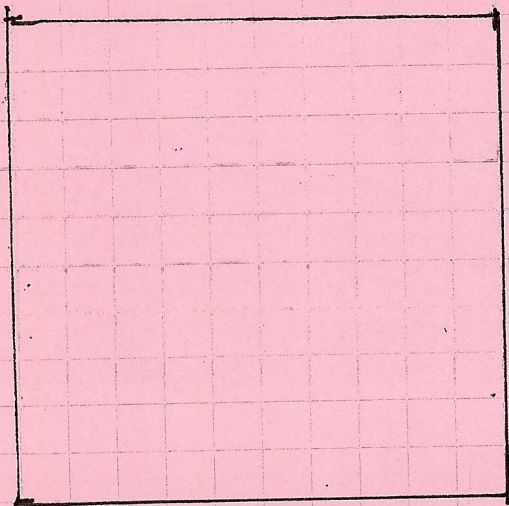
D  $\frac{11}{25}$

10. Sarah made a pecan pie for Thanksgiving. Her family ate 6 of the pie's 8 equal slices. What percent of the pie did the family eat?

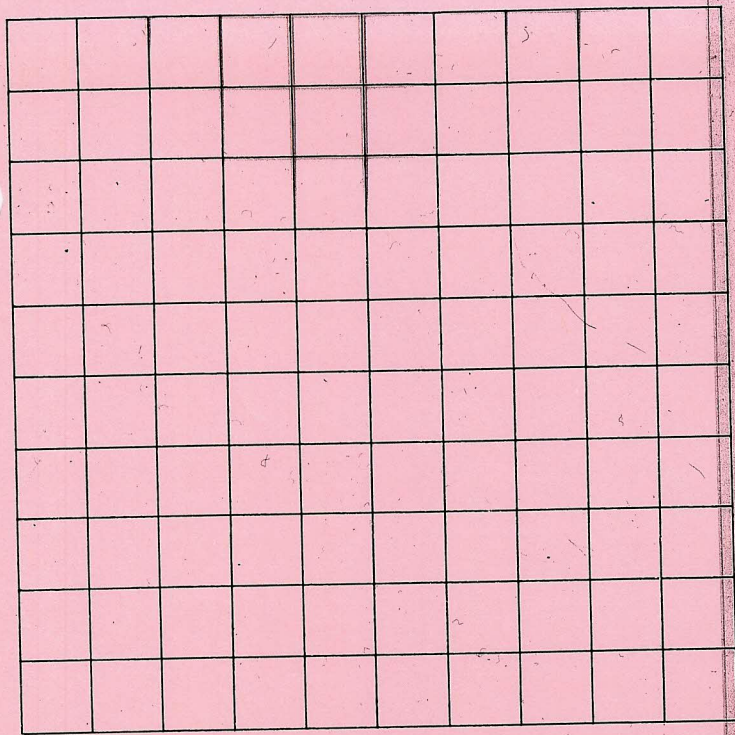
F 60%  
H 75%

G 70%  
J 80%

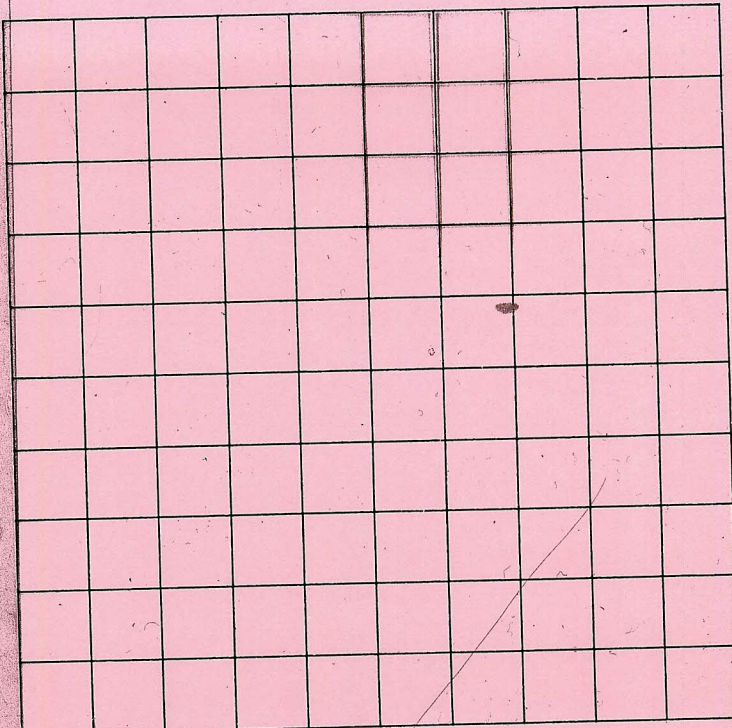




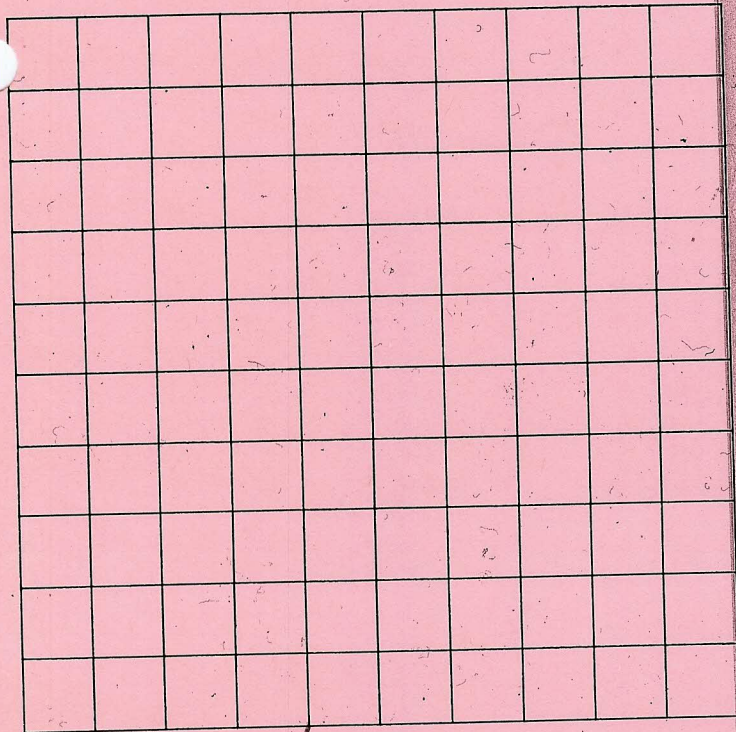




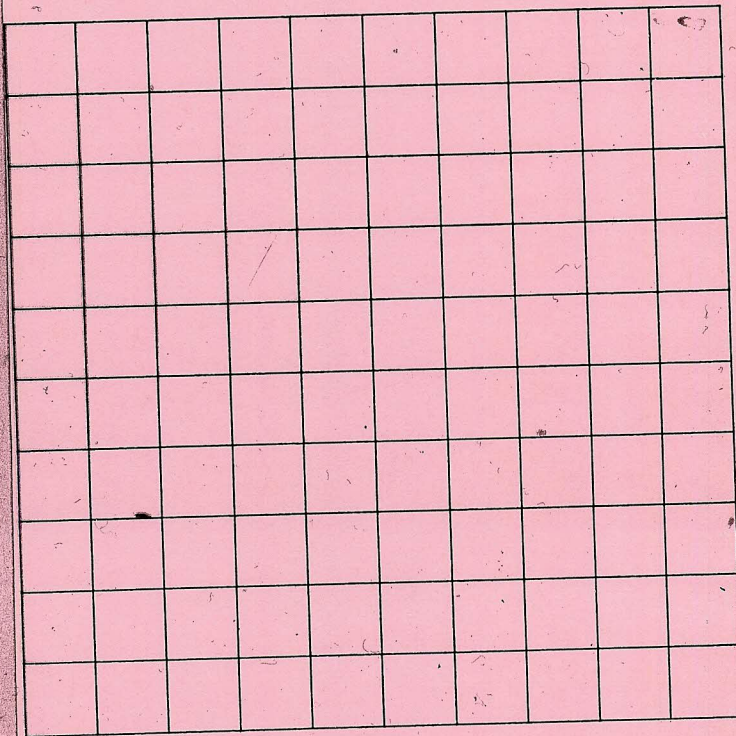
**AREA GRID (10cm x 10 cm)**



**AREA GRID (10cm x 10 cm)**



**AREA GRID (10cm x 10 cm)**



**AREA GRID (10cm x 10 cm)**

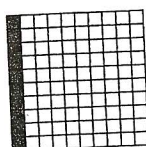


# Decimals

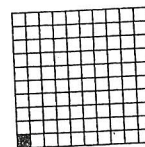
A **decimal** is a number that includes a period called a **decimal point**. The digits to the right of the decimal point are a value less than one.



one whole



one tenth



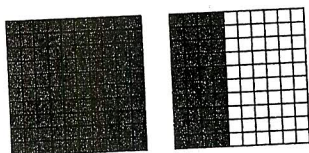
one hundredth

The place value chart below helps explain decimals.

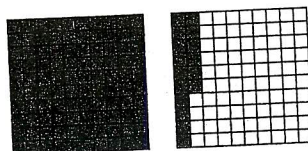
hundreds	tens	ones	tenths	hundredths	thousandths
6	3	2	.	4	
	4	7	.	0	5
		8	.	0	0
					9

A decimal is read as "and." The first number, 632.4, is read as "six hundred thirty-two and four tenths." The second number, 47.05, is read as "forty-seven and five hundredths." The third number, 8.009, is read as "eight and nine thousandths."

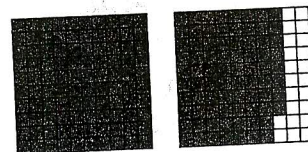
**Directions:** Write the decimals shown below. Two have been done for you.



1. 1.4



2. \_\_\_\_\_



3. \_\_\_\_\_

4. six and five tenths

6.5

5. twenty-two and nine tenths

\_\_\_\_\_

6. thirty-six and fourteen hundredths

\_\_\_\_\_

7. forty-seven hundredths

\_\_\_\_\_

8. one hundred six and four tenths

\_\_\_\_\_

9. seven and three hundredths

\_\_\_\_\_

10. one tenth less than 0.6

\_\_\_\_\_

11. one hundredth less than 0.34

\_\_\_\_\_

12. one tenth more than 0.2

\_\_\_\_\_

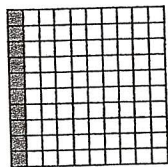
**10-4****Study Guide and Intervention****Modeling Percents**

Ratios like 41 out of 100, 25 out of 100, or 2 out of 100 can be written as percents. A **percent** (%) is a ratio that compares a number to 100. Since the word percent means *out of one hundred*, you can use a  $10 \times 10$  grid to model percents.

**EXAMPLES****1 Model 10%.**

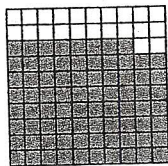
10% means 10 out of 100.

So, shade 10 of the 100 squares.

**2 Model 78%.**

78% means 78 out of 100.

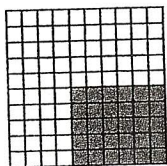
So, shade 78 of the 100 squares.



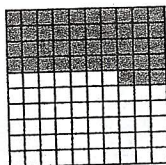
You can use what you know about decimal models and percents to identify the percent of a model that is shaded.

**EXAMPLES**

Identify each percent that is modeled.

**3**

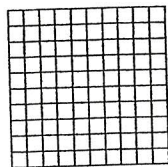
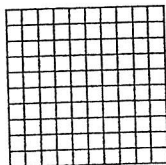
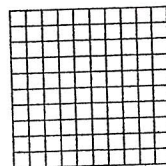
There are 30 out of 100 squares shaded. So, the model shows 30%.

**4**

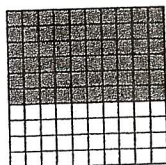
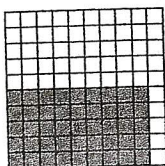
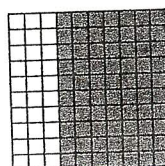
There are 43 out of 100 squares shaded. So, the model shows 43%.

**EXERCISES**

**Model each percent.**

**1. 20%****2. 55%****3. 12%**

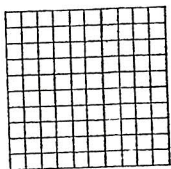
**Identify each percent that is modeled.**

**4.****5.****6.**

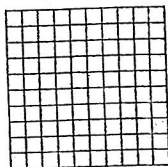


**10-4****Practice: Skills****Modeling Percents****Model each percent.**

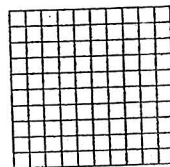
1. 15%



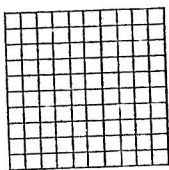
2. 50%



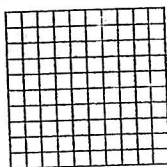
3. 75%



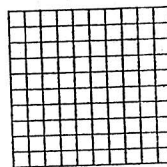
4. 80%



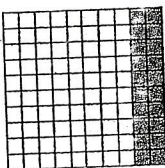
5. 21%



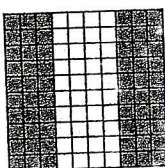
6. 48%

**Identify each percent that is modeled.**

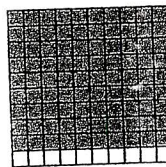
7.



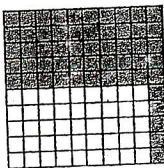
8.



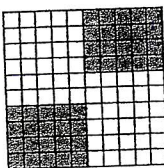
9.



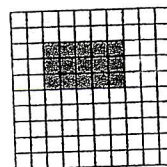
10.



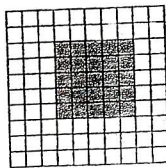
11.



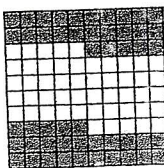
12.



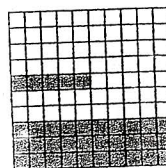
13.



14.



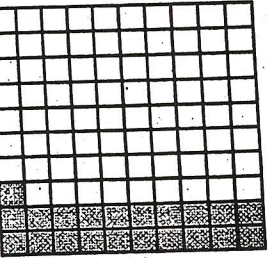
15.



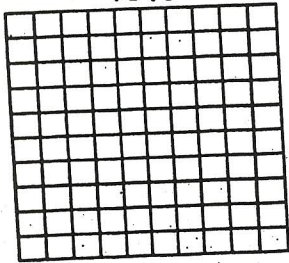
Shade the part of the squares indicated by the percent.

Example

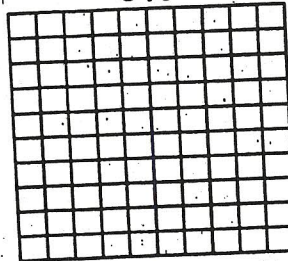
21%



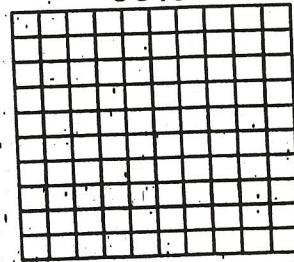
45%



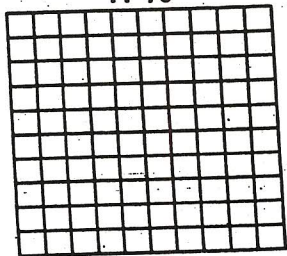
3%



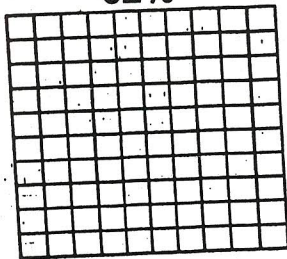
95%



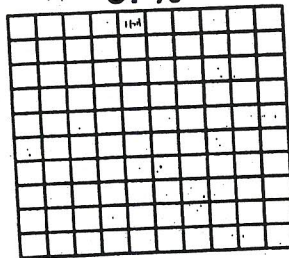
47%



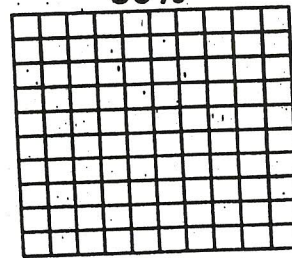
32%



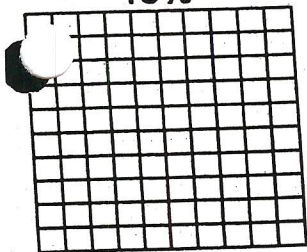
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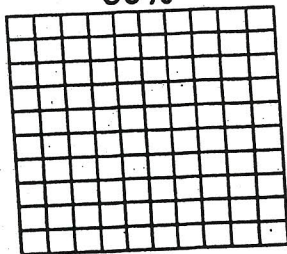
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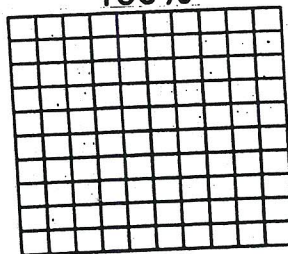
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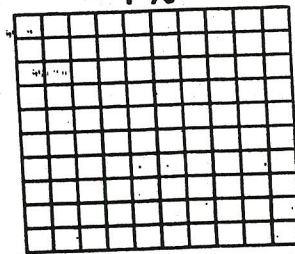
56%



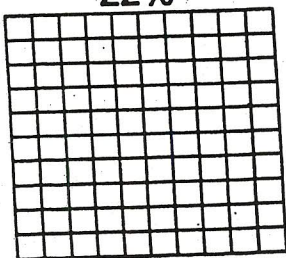
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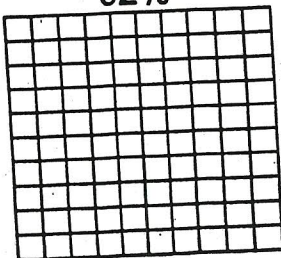
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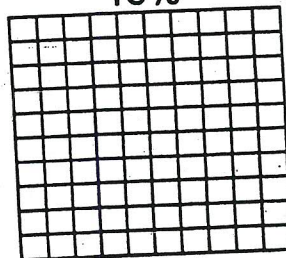
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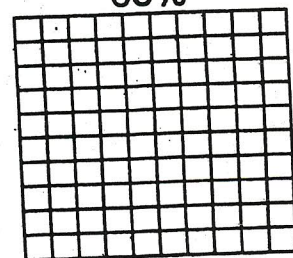
92%



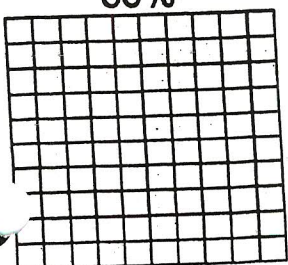
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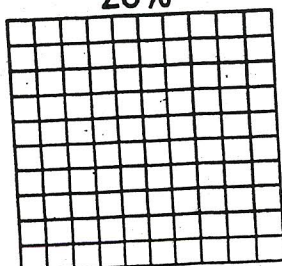
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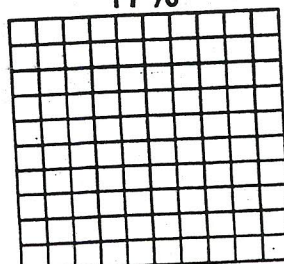
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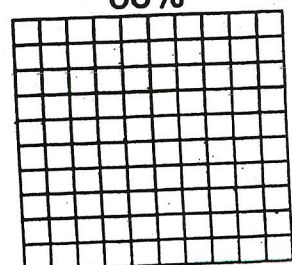
28%



17%



88%

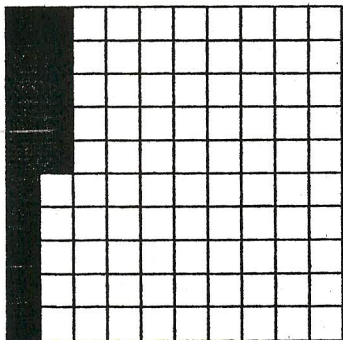




**Unit 3: Percents—Computation**

# Percent

**Percent** means per hundred. The symbol for percent is %. Use a percent to show the ratio of shaded blocks to all 100 blocks.



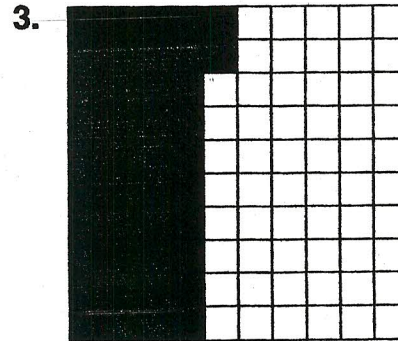
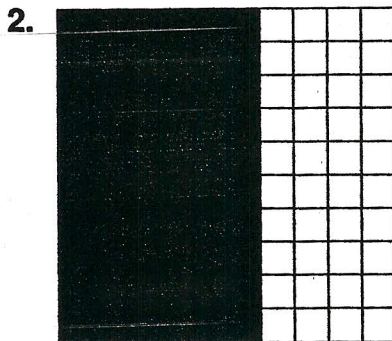
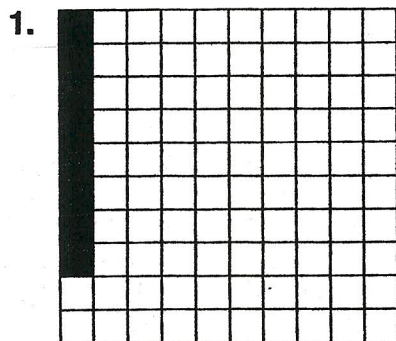
15 out of 100

Ratio  $\rightarrow \frac{15}{100}$

Decimal  $\rightarrow 0.15$

Percent  $\rightarrow 15\%$

Write the percent that tells what part is shaded.



Write the percents for the ratios.

- |                             |                            |                            |
|-----------------------------|----------------------------|----------------------------|
| 4. 7 out of 100 _____       | 5. 6 out of 100 _____      | 6. 24 out of 100 _____     |
| 7. $\frac{5}{100}$ _____    | 8. $\frac{28}{100}$ _____  | 9. $\frac{89}{100}$ _____  |
| 10. $\frac{100}{100}$ _____ | 11. $\frac{29}{100}$ _____ | 12. $\frac{17}{100}$ _____ |

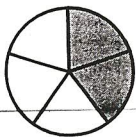
Write the percents for the decimals.

- |                |                |                |                |
|----------------|----------------|----------------|----------------|
| 13. 0.82 _____ | 14. 0.99 _____ | 15. 0.01 _____ | 16. 0.56 _____ |
| 17. 0.03 _____ | 18. 0.25 _____ | 19. 0.02 _____ | 20. 0.31 _____ |

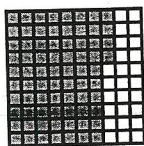
# What is a Percent?

Give the percent of each figure that is shaded.

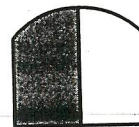
1. \_\_\_\_\_



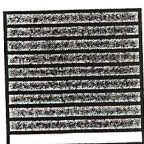
2. \_\_\_\_\_



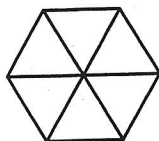
3. \_\_\_\_\_



4. \_\_\_\_\_



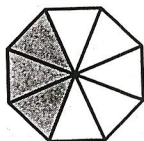
5. \_\_\_\_\_



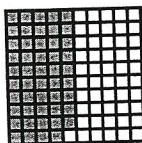
6. \_\_\_\_\_



7. \_\_\_\_\_



8. \_\_\_\_\_



9. \_\_\_\_\_



The circle graph shows the educational attainment of Americans over 25 years old in 1994. Use the graph for Exercises 10–12.

10. What percent of the population has completed

less than 4 years of high school? \_\_\_\_\_

4 years of high school or more? \_\_\_\_\_

11. Which category includes the highest percent of Americans over 25?

\_\_\_\_\_

What is the percent? \_\_\_\_\_

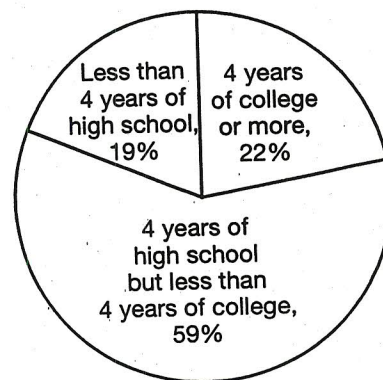
12. Which two categories combined amount for 41% of Americans over 25?

\_\_\_\_\_

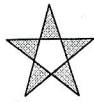
13. **Geography** 22% of the land in Vietnam is arable (suitable for farming). What percent is not arable?

\_\_\_\_\_

Educational Attainment of Americans







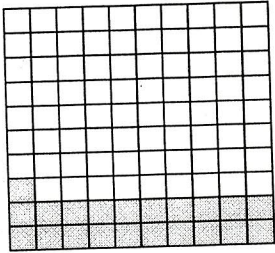
# Percents



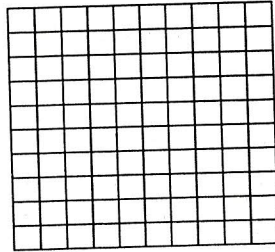
Shade the part of the squares indicated by the percent.

Example

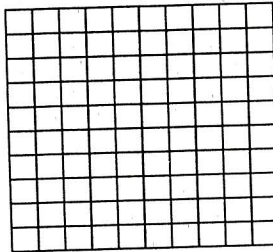
21%



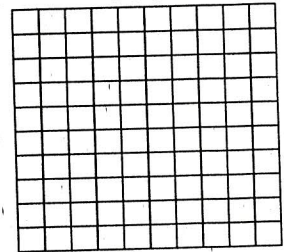
45%



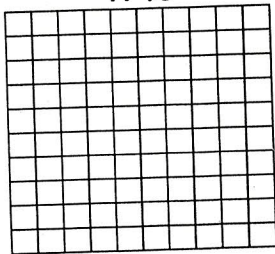
3%



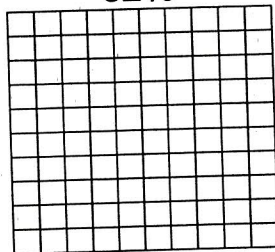
95%



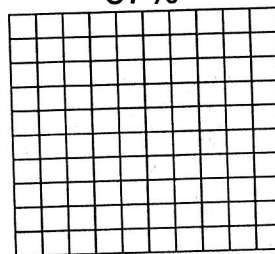
47%



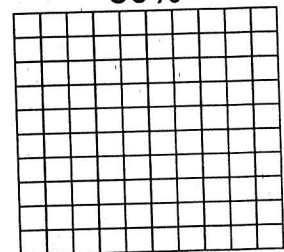
32%



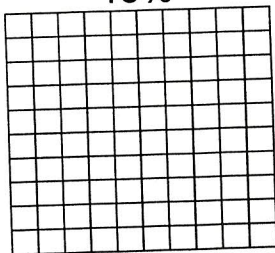
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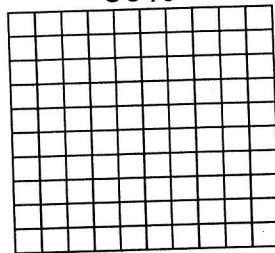
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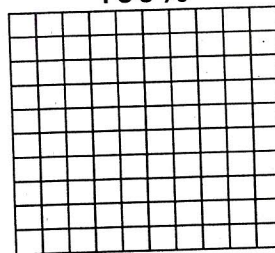
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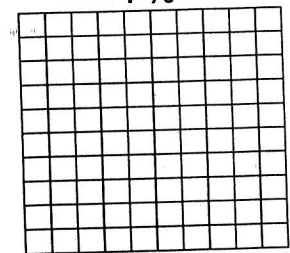
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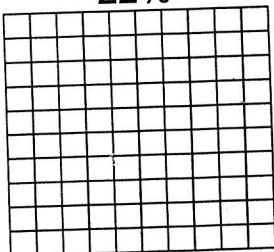
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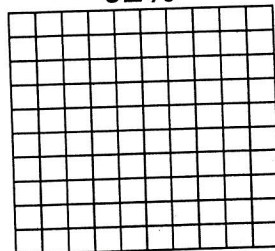
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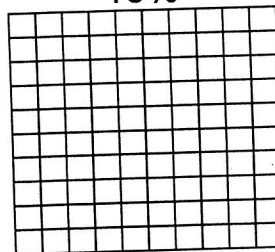
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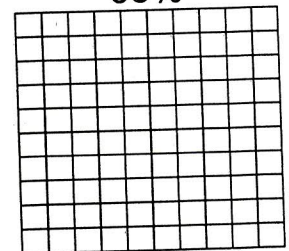
92%



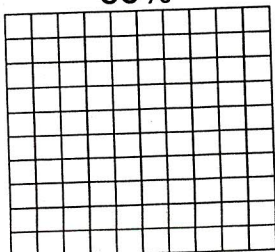
18%



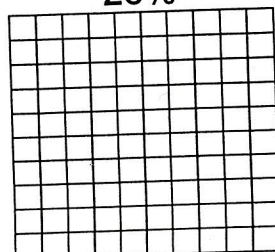
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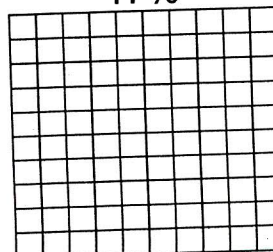
55%



28%



17%



88%

