

Math: 28%
Art: 16%

Science: 21%
English: 13%

Social Studies: 15%
Other: 7%

CCSS Common Core State Standards
Content Standards
Preparation for 6.RP.3c
MP Mathematical Practices
1, 3, 4, 5, 6

1. Write a fraction with a denominator of 100 to represent the percent for each subject.

Math: $\frac{28}{100}$

Science: $\frac{21}{100}$

Art: $\frac{16}{100}$

Social Studies: $\frac{15}{100}$

English: $\frac{13}{100}$

Other: $\frac{7}{100}$

2. Write each fraction from Exercise 1 as a decimal.

Math: 0.28

Science: 0.21

Art: 0.16

Social Studies: 0.15

English: 0.13

Other: 0.07

3. **MP Make a Conjecture** Look back at Exercise 2. Compare the decimals to the percents. Explain how to write a percent as a decimal. **Sample answer: Take off the percent sign to show a whole number. Move the decimal point two places to the left.**



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= 40% ✓

Write the fraction as a percent.

Guided Practice



Write each percent as a decimal. (Examples 1–3)

1. $27\% = 0.27$

Show your work → $\frac{27}{100}$

2. $15\% = 0.15$

3. $4\% = 0.04$

$\frac{4}{100}$ $\frac{04}{100}$

Write each decimal as a percent. (Examples 4 and 5)

4. $0.3 = 30\%$

$\frac{3}{10} = \frac{30}{100}$

39

5. $0.82 = 82\%$

6. $0.51 = 51\%$

$.51 = \frac{51}{100}$

7. **STEM** About 0.7 of the human body is water. What percent is equivalent to 0.7? (Example 6) 70%

Rate Yourself!

How well do you understand percents and decimals? Circle the image that applies.





Write each decimal as a percent. (Examples 4 and 5)

4. $0.3 = 30\%$

$$\frac{3}{10} = \frac{30}{100}$$

30

5. $0.82 = 82\%$

82%

6. $0.51 = 51\%$

$$.51 = \frac{51}{100}$$

7. **STEM** About 0.7 of the human body is water. What percent is equivalent to 0.7? (Example 6) 70%

8. **Q Building on the Essential Question** What is the relationship between percents and decimals?

Sample answer: A percent is a ratio that compares a number to 100. Percents can be converted to equivalent decimals by dividing by 100 and removing the % sign.

Rate Yourself!

How well do you understand percents and decimals? Circle the image that applies.



Clear



Somewhat Clear



Not So Clear

For more help, go online to access a Personal Tutor.



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Independent Practice

Go online for Step-by-Step Solutions



Write each percent as a decimal. (Examples 1–3)

1.  35% = 0.35



2. 2% = 0.02

3. 31% = 0.31

4. 95% = 0.95

Write each decimal as a percent. (Examples 4 and 5)

5. 0.22 = 22%

6. 0.79 = 79%

7. 0.1 = 10%

8. 0.16 = 16%

9. **Financial Literacy** A bank offers an interest rate of 4% on a savings account. Write 4% as a decimal. (Examples 1–3)

0.04

10. When making a peanut butter and jelly sandwich, 96% of people put the peanut butter on first. Write 96% as a decimal.

(Examples 1–3)





9. **Financial Literacy** A bank offers an interest rate of 4% on a savings account. Write 4% as a decimal. (Examples 1–3)

0.04

10. When making a peanut butter and jelly sandwich, 96% of people put the peanut butter on first. Write 96% as a decimal.

(Examples 1–3)

0.96

11. In a recent year, 0.12 of Americans downloaded a podcast from the Internet. What percent is equivalent to 0.12?

(Example 6) **12%**

12. In a recent year, the number of homes with digital cameras grew 0.44 from the previous year. Write 0.44 as a percent. (Example 6)

44%

13. **Financial Literacy** The formula $I = prt$ gives the simple interest I earned on an account where an amount p is deposited at an interest rate r for a certain number of years t . Use the table to order the accounts from least to greatest interest earned after 5 years.

C: \$59.50, A: \$70, B: \$87.50

Accounts at First Savings Bank

Account	p (\$)	r (%)
A	350	4
B	500	3.5
C	280	4.25





14. **MP Persevere with Problems** Daphne wants to buy a coat that costs \$80. The store that sells the coat has multiple locations. The sales tax in each county is shown in the table. How much more would the coat cost in Delaware county than Fairfield county?

County	Tax Rate (%)
Delaware	7.25
Fairfield	6.5
Franklin	6.75

\$0.60

15. Dante took three tests on Friday. He got a 92% on his English test, an 88% on his math test and a 90% on his science test. Write each percent as a decimal in order from least to greatest.

0.88, 0.90, 0.92



H.O.T. Problems Higher Order Thinking

16. **MP Reason Inductively** Write a decimal between 0.5 and 0.75. Then write it as a fraction in simplest form and as a percent.

Sample answer: 0.6; $\frac{3}{5}$; 60%

17. **MP Persevere with Problems** How would you write $43\frac{3}{4}\%$ as a decimal?
Sample answer: Since $\frac{3}{4}$ is equal to 0.75, write $43\frac{3}{4}\%$ as 43.75%. Then

change 43.75% to the decimal 0.4375.

18. **MP Model with Mathematics** Write a percent between 25% and 50%. Then write it as a decimal and as a fraction.

%; 0.26; $\frac{13}{50}$



17. **MP Persevere with Problems** How would you write $43\frac{3}{4}\%$ as a decimal?
Sample answer: Since $\frac{3}{4}$ is equal to 0.75, write $43\frac{3}{4}\%$ as 43.75%. Then change 43.75% to the decimal 0.4375.
18. **MP Model with Mathematics** Write a percent between 25% and 50%. Then write it as a decimal and as a fraction in simplest form. Sample answer: 26%; 0.26; $\frac{13}{50}$
19. **MP Reason Inductively** Explain why percents are rational numbers.
Sample answer: Every percent can be written as a fraction with a denominator of 100, and since every fraction is a rational number, every percent is a rational number.
20. **MP Model with Mathematics** Write a problem about a real-world situation in which you would either write a percent as a decimal or write a decimal as a percent.
Sample answer: Niko scored a 92% on his math test. Express this percent as a decimal.
21. **MP Reason Abstractly** Each square below is divided into sections of equal size. In which square is 25% of the square *not* shaded? Square D

