

Drill & Practice

PERCENTS

REM 1140A

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A TEACHING RESOURCE FROM



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Introduction

From changing a decimal to a percent to finding the percent of a whole number, *Drill & Practice: Percents* focuses entirely on the basic concepts of percents. As students work through the book, they will develop the skills necessary for a solid understanding of this essential math skill.

Drill & Practice: Percents is packed with over 400 problems dealing with percents. The book is divided into 7 sections, each focusing on a different aspect of percents. The sections build on one another in skill comprehension and increase in difficulty. For example, before starting on the section that focuses on changing fractions to percents, students should cover the sections that focus on changing fractions to decimals and changing decimals to percents. Both of these skills are at a lower difficulty level than changing fractions to percents and are involved in the process of this higher percents skill. Each section begins with easy-to-follow, step-by-step instructions and includes practice problems that reinforce an understanding of the skill covered in that section. As students progress through the book, their understanding of and comfort level with calculating percents should increase.

Pre and post-tests are included in *Drill & Practice: Percents* as assessment tools. The pre-test may be used before beginning lessons in the book to assess students' familiarity with percents and the skills involved in them. Lessons may then be assigned accordingly. (Some review of basic place value and rounding skills may be necessary before beginning the activities in this book.) The post-test may be used after the lessons in the book have been completed to assess students' comprehension of percents. (Review of certain skills may be necessary in order to enhance and solidify students' comprehension of percents.)

These activities follow NCTM standards and support state math standards and benchmarks.

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Name _____

Pre-Test



1. Write each number in the tenths place on the line.

.04 _____ 2.65 _____ .856 _____

2. Write each number in the hundredths place on the line.

.56 _____ .059 _____ 3.37 _____

3. Write each number in the thousandths place on the line.

.587 _____ .6738 _____ .009 _____

4. Round each number to the nearest hundredths place.

.864 _____ .019 _____ .423 _____

5. Identify the numerator and the denominator in each fraction.

$\frac{3}{4}$ _____ _____ numerator denominator $\frac{2}{3}$ _____ _____ numerator denominator $\frac{9}{10}$ _____ _____ numerator denominator

6. Change each fraction to a decimal. Round each decimal to the nearest hundredths place.

$\frac{4}{5}$ _____ $\frac{3}{4}$ _____ $\frac{1}{4}$ _____

7. Change each decimal to a percent.

.48 _____ .06 _____ .8 _____

8. Change each percent to a decimal.

54% _____ 9% _____ 31% _____

9. What is 6% of 12? _____ 10. What is 25% of 100? _____

Name _____

Decimal → Percent



TO CHANGE A DECIMAL TO A PERCENT:	
Step 1: Move the decimal point two places to the right. Add a zero if necessary.	$.20 = 20$
Step 2: Attach the percent (%) symbol.	$20 = 20\%$

Change the decimals to percents. Round each decimal to the nearest hundredths place before changing it to a percent. Draw an arrow to show your work. The first one is done for you.

$$1. \ .36 = \underset{\substack{\text{decimal}}}{\text{36.}} = \underset{\substack{\text{percent}}}{36\%}$$

$$2. \ .20 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$3. \ .92 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$4. \ .61 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$5. \ .02 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$6. \ .16 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$7. \ .30 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$8. \ .23 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$9. \ .64 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$10. \ .09 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$11. \ .12 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$12. \ .319 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

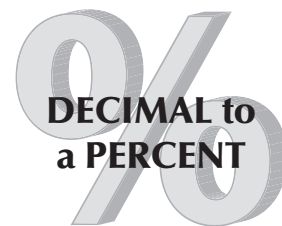
$$13. \ .554 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$14. \ .333 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$15. \ .361 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$16. \ .026 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Name _____



Change the decimals to percents. Round each decimal to the nearest hundredths place before changing it to a percent. The first one is done for you.

1. $.888 = \underline{.89} = \underline{89\%}$
decimal percent

2. $.50 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

3. $.06 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

4. $.71 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

5. $.56 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

6. $.786 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

7. $.438 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

8. $.551 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

9. $.224 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

10. $.427 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

11. $.461 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

12. $.308 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

13. $.872 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

14. $.015 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

15. $.125 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

16. $.103 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

17. $.974 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

18. $.169 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

19. $.494 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

20. $.613 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

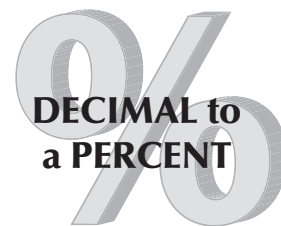
21. $.321 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

22. $.645 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

23. $.567 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

24. $.265 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

Name _____



Change the decimals to percents. Round each decimal to the nearest hundredths place before changing it to a percent. The first one is done for you.

1. $.437 = \underline{.44} = \underline{44\%}$
decimal percent

13. $.712 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

2. $.989 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

14. $.019 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

3. $.041 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

15. $.127 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

4. $.201 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

16. $.151 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

5. $.688 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

17. $.812 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

6. $.105 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

18. $.624 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

7. $.453 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

19. $.733 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

8. $.521 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

20. $.984 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

9. $.267 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

21. $.968 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

10. $.411 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

22. $.906 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

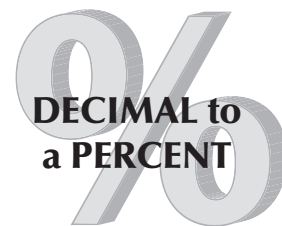
11. $.70 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

23. $.561 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

12. $.313 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

24. $.282 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

Name _____



Change the decimals to percents. Round each decimal to the nearest hundredths place before changing it to a percent. The first one is done for you.

1. $.172 = \underline{.17} = \underline{17\%}$
decimal percent

2. $.741 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

3. $.546 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

4. $.421 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

5. $.462 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

6. $.883 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

7. $.049 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

8. $.227 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

9. $.157 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

10. $.100 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

11. $.197 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

12. $.837 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

13. $.296 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

14. $.497 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

15. $.124 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

16. $.952 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

17. $.637 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

18. $.052 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

19. $.768 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

20. $.363 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

21. $.191 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

22. $.009 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

23. $.097 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

24. $.039 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

Name _____

Percent → Decimal



TO CHANGE A PERCENT TO A DECIMAL:

Step 1: Drop the percent (%) symbol.

$$30\% = 30$$

Step 2: Place a decimal point after the last number on the right.

$$30.$$

Step 3: Move the decimal point two places to the left. Add a zero if necessary.

$$\underset{\cdot}{3}0\underset{\cdot}{0} = .30$$

Change the percents to decimals. Draw an arrow to show your work. The first one is done for you.

$$1. \quad 9\% = \underset{\cdot}{0}9\underset{\cdot}{0} = \underset{\text{decimal}}{.09}$$

$$2. \quad 68\% = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$3. \quad 44\% = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$4. \quad 60\% = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$5. \quad 90\% = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$6. \quad 11\% = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$7. \quad 3\% = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$8. \quad 23\% = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$9. \quad 38\% = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$10. \quad 25\% = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$11. \quad 1\% = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$12. \quad 99\% = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

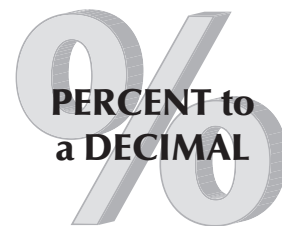
$$13. \quad 75\% = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$14. \quad 18\% = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$15. \quad 76\% = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$16. \quad 63\% = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

Name _____



Change the percents to decimals. Draw an arrow to show your work. The first one is done for you.

1. $31\% = \underline{.31} = \underline{.31}$
decimal

2. $40\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

3. $50\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

4. $60\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

5. $17\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

6. $4\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

7. $6\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

8. $19\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

9. $39\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

10. $48\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

11. $79\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

12. $97\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

13. $45\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

14. $65\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

15. $56\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

16. $9\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

17. $21\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

18. $37\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

19. $98\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

20. $23\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

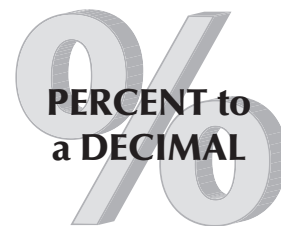
21. $42\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

22. $29\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

23. $14\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

24. $96\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

Name _____



Change the percents to decimals. Draw an arrow to show your work. The first one is done for you.

1. $15\% = \underline{.15} = \underline{.15}$
decimal

13. $90\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

2. $95\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

14. $16\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

3. $18\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

15. $46\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

4. $94\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

16. $41\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

5. $12\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

17. $71\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

6. $42\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

18. $38\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

7. $19\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

19. $2.1\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

8. $47\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

20. $36.1\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

9. $3\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

21. $83.5\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

10. $7\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

22. $11.7\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

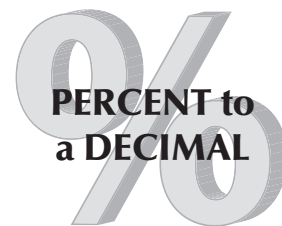
11. $81\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

23. $99.9\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

12. $1\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

24. $73.6\% = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

Name _____



Change the percents to decimals. Then use your answers to connect the dots. Answer the riddle. The first one is done for you.

1. 6% = .06 = .06
decimal

2. 11% = _____ = _____

3. 20% = _____ = _____

4. 16% = _____ = _____

5. 8% = _____ = _____

6. 49% = _____ = _____

7. 33% = _____ = _____

8. 78% = _____ = _____

9. 13% = _____ = _____

10. 10% = _____ = _____

11. 94% = _____ = _____

12. 2% = _____ = _____

13. 53% = _____ = _____

14. 61% = _____ = _____

