

NAME _____

Module 7 Ratio, Proportion, and Percent
Lesson 3 Decimal and Percent Equivalents

Independent Practice

7.3

Find the decimal and percent equivalents.

1. $\frac{7}{10}$

Decimal: 0.7
Percent: 70%

2. $\frac{1}{25}$

Decimal: 0.04
Percent: 4%

3. $\frac{2}{15}$

Decimal: $0.\overline{13}$
Percent: $13\frac{1}{3}\%$

4. $\frac{9}{20}$

Decimal: 0.45
Percent: 45%

5. $\frac{9}{600}$

Decimal: 0.015
Percent: 1.5%

6. $\frac{7}{9}$

Decimal: $0.\overline{7}$
Percent: $77\frac{7}{9}\%$

7. $\frac{10}{11}$

Decimal: $0.\overline{90}$
Percent: $90\frac{10}{11}\%$

8. $3\frac{4}{25}$

Decimal: 3.16
Percent: 316%

9. $16\frac{3}{5}$

Decimal: 16.6
Percent: 1,660%

10. Raul ran $\frac{1}{8}$ mile. What percent of a mile did Raul run?

Raul ran 12.5% of a mile.

11. Sally read $\frac{8}{9}$ of a book. What percent of the book did she read?

Sally read $88\frac{8}{9}\%$ of the book.

Journal

1. Explain two ways to convert $\frac{23}{25}$ to a percent.
2. Belinda found $\frac{1}{6}$ as shown below. What is her error? What is the correct percent?

$$\begin{array}{r} 0.1\bar{6} \\ 6 \overline{)1.00} \\ \underline{-6} \\ 40 \\ \underline{-36} \\ 4 \end{array} \qquad = 16\frac{1}{6}\%$$

3. Why are all mixed numbers greater than 100%? Explain how to choose a mixed number if its percent equivalent has to be between 500% and 600%.

Cumulative Review

Tell if each number is a square number.

1. 30
NO

2. 100
YES

3. 500
NO

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Evaluate.

4. $5^2 + \sqrt{9}$

28

5. $\sqrt{256} - \sqrt{1}$

15

6. $\sqrt{4} - 10^2$

-98

7. $\sqrt{250,000}$

500

8. Find 45% of 800.

360

9. Find 250% of 1,500.

3,750

Answer each question.

10. Roxanne has eight pencils and 10 pens. Gavin has 12 pencils and 15 pens. Are the ratios of pencils to pens for each student the same? Tell why or why not.

Yes; Possible answer: The ratios can be written as $\frac{8}{10}$ and $\frac{12}{15}$. Both of these ratios simplify to $\frac{4}{5}$.

11. What is the perimeter of a square if the area of the square is 400 square meters?

80 meters

Possible Journal Answers

1. One way to write $\frac{23}{25}$ as a percent is to divide 23 by 25. The quotient is 0.92. Then, I move the decimal point two places to the right: 92%. The other way is to write $\frac{23}{25}$ as an equivalent fraction with a denominator of 100. To do so, I multiply both 23 and 25 by four: $\frac{23 \times 4}{25 \times 4} = \frac{92}{100}$. Because a percent is a number out of 100, the new numerator is the percent: 92%.
2. Belinda made an error when converting from a repeating decimal to a percent. The decimal $0.1\bar{6}$ is 0.166666... . Move the decimal two places to the right: 16.6666... . Because $0.\bar{6}$ is equivalent to $\frac{2}{3}$, the repeating decimal is equivalent to $16\frac{2}{3}\%$.
3. All mixed numbers are greater than 100% because they are all greater than one, and one equals 100%. Because five is equivalent to 500%, I choose five for the mixed number. I choose a proper fraction for the fractional part of the mixed number so that its percent equivalent is less than 100%, keeping the sum of the two parts less than 600%. For example, the mixed number $5\frac{1}{2}$ equals 550% because $\frac{1}{2}$ is equivalent to 50% and five is equivalent to 500%.