

**Check What You Learned**

Ratios, Rates, and Percents

Solve each proportion.

1. $\frac{\square}{12} = \frac{5}{4}$	a	<u>15</u>	2. $\frac{9}{8} = \frac{18}{\square}$	b	<u>27</u>	3. $\frac{2}{\square} = \frac{10}{15}$	c	<u>3</u>
4. $\frac{15}{21} = \frac{\square}{7}$		<u>5</u>	5. $\frac{\square}{8} = \frac{18}{24}$		<u>6</u>	6. $\frac{5}{7} = \frac{10}{\square}$		<u>21</u>
3. $\frac{5}{\square} = \frac{20}{24}$		<u>6</u>	6. $\frac{4}{7} = \frac{\square}{28}$		<u>16</u>	7. $\frac{4}{3} = \frac{8}{\square}$		<u>15</u>
4. $\frac{\square}{10} = \frac{21}{15}$		<u>14</u>	7. $\frac{15}{\square} = \frac{20}{12}$		<u>9</u>	8. $\frac{13}{43} = \frac{\square}{12}$		<u>4</u>

Write the equivalent decimal and fraction for each percent.

	a	b		c	d
Percent	Decimal	Fraction	Percent	Decimal	Fraction
5. 24%	<u>.24</u>	$\frac{24}{100} = \frac{6}{25}$	110%	<u>1.10</u>	$1\frac{10}{100} = 1\frac{1}{10}$
6. 37%	<u>.37</u>	$\frac{37}{100}$	55%	<u>.55</u>	$\frac{55}{100} = \frac{11}{20}$
7. 6%	<u>.06</u>	$\frac{6}{100} = \frac{3}{50}$	235%	<u>2.35</u>	$2\frac{35}{100} = 2\frac{7}{20}$

For each fraction or decimal, write the equivalent percent.

8. $\frac{4}{25}$	a	$\frac{16}{100} = 16\%$	0.05 =	b	<u>5%</u>	$\frac{3}{5}$	c	$\frac{60}{100} = 60\%$
9. 0.8 =		<u>80%</u>	$\frac{7}{8}$		$\frac{87.5}{100} = 87.5\%$	1.3 =		<u>130%</u>

Complete each sentence.

a	b
10. 24 is 30% of <u>80</u> .	42 is <u>84</u> % of 50.
11. 20% of 75 is <u>15</u> .	112 is 70% of <u>160</u> .
12. 6.2 is _____% of 124.	32% of 85 is <u>27.2</u> .
13. 9 is 12.5% of _____.	7 is _____% of 56.
14. 125% of 48 is <u>60</u> .	5.5 is 125% of _____.

11)  $\frac{x}{75} = \frac{20}{100}$   
 $\frac{x}{75} = \frac{20 \div 20}{100 \div 20} = \frac{1}{5}$   
 $x = 75 \div 5 = 15$

14)  $\frac{x}{48} = \frac{125}{100}$   
 $\frac{x}{48} = \frac{125 \div 25}{100 \div 25} = \frac{5}{4}$   
 $x = 48 \div 4 \times 5 = 60$



**Check What You Learned**

**SHOW YOUR WORK**

**Ratios, Rates, and Percents**

Solve each problem.

- 15. Jeans are \$20 for 2 pairs. Kerry spent \$40 on jeans. How many pairs did she buy?  
Kerry bought 4 pairs of jeans.
- 16. Skirts are 4 for \$30. Marta and her sisters bought 6 skirts. How much did they pay?  
They paid \$45.
- 17. Sweaters are 3 for \$50. Leslie and her mother spent \$100 on sweaters. How many did they buy?  
They bought 6 sweaters.
- 18. T-shirts are 3 for \$18. Tia bought 4 T-shirts. How much did she spend?  
Tia spent \$24.
- 19. In Keon's homeroom class,  $\frac{3}{5}$  of the students participate in sports. What percent of students participate in sports?  
60% participate in sports.
- 20. Fifty-five percent of the students at West Side Middle School walk to school. What fraction of the students walk to school?  
 $\frac{11}{20}$  of the students walk to school.
- 21. A new car that costs \$17,500 loses 25% of its value in the first year. How much is the loss of value?  
The loss of value is 4375.
- 22. The 140-member chorus at West Side Middle School wants to add 30 percent more members next year. How many members do they want to add?  
They want to add 42 members.

15.  $\frac{\$}{P}: \frac{20 \times 2}{2 \times 2} = \frac{40}{4}$   
4 PAIRS OF JEANS FOR \$40.

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16.  $\frac{\$}{S}: \frac{4 \div 2}{30 \div 2} = \frac{2}{15}$   $\frac{2 \times 3}{15 \times 3} = \frac{6}{45}$   
\$45 for 6 skirts.

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17.  $\frac{\$}{S}: \frac{3 \times 2}{50 \times 2} = \frac{6}{100}$   
6 sweaters for \$100.

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18.  $\frac{\$}{T}: \frac{3 \div 3}{18 \div 3} = \frac{1}{6}$   $\frac{1 \times 4}{6 \times 4} = \frac{4}{24}$   
\$24 for 4 T-shirts.

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19.  $\frac{3}{5} = \frac{x}{100}$   
60% participate in sports.

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20.  $\frac{55 \div 5}{100 \div 5} = \frac{11}{20}$

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21.  $\frac{17500 \times 25}{100} = 4375$   
\$4375

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22.  $\frac{x}{140} = \frac{30 \div 10}{100 \div 10} \times \frac{3}{10}$   
 $\frac{x}{140} = \frac{3}{10}$   
 $x = 42$

CHAPTER 3 POSTTEST