CHAPTER 7 TEST

For problems 1 – 4, multiply the decimals.

1) \(0.45 \times 0.6\)
2) \(1.37 \times 0.3\)
3) \(2.7 \times 1.6\)
4) \(0.028 \times 1.02\)

For problems 5 – 8, cross multiply to see if the fractions are equal.

5) \(\frac{1}{3} \times \frac{8}{24}\)
6) \(\frac{3}{4} \times \frac{6}{9}\)
7) \(\frac{11}{12} \times \frac{22}{24}\)
8) \(\frac{3}{5} \times \frac{15}{25}\)

For problems 9 – 12, find the missing number by cross multiplying. Your answers will be integers (whole numbers.)

9) \(\frac{1}{2} = \frac{8}{y}\)
10) \(\frac{3}{4} = \frac{x}{16}\)
11) \(\frac{3}{13} = \frac{6}{t}\)
12) \(\frac{3}{7} = \frac{x}{21}\)

For problems 13 – 16, find the missing number by cross multiplying. Your answers will have fractions/decimals.

13) \(\frac{2}{5} = \frac{7}{a}\)
14) \(\frac{3}{b} = \frac{10}{12}\)
15) \(\frac{c}{4} = \frac{7}{10}\)
16) \(\frac{5}{6} = \frac{9}{z}\)
For problems 17 – 20, use the percent equation to solve.
17) What is the percent equation? 18) 15 is what % of 90?
19) What is 70% of 60? 20) 40 is 10 % of what?

For problems 21 – 25, fill in table.

<table>
<thead>
<tr>
<th>Percent</th>
<th>Fraction</th>
<th>Decimal</th>
</tr>
</thead>
<tbody>
<tr>
<td>21)</td>
<td>79 %</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14/100</td>
<td></td>
</tr>
<tr>
<td>22)</td>
<td>1 3/100</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
For problems 21 – 25, fill in table.

<table>
<thead>
<tr>
<th>Percent</th>
<th>Fraction</th>
<th>Decimal</th>
<th>Square Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>24)</td>
<td></td>
<td>1.17</td>
<td></td>
</tr>
<tr>
<td>25)</td>
<td></td>
<td>8 %</td>
<td></td>
</tr>
</tbody>
</table>

BONUS QUESTIONS:

<table>
<thead>
<tr>
<th>16</th>
<th>0.056</th>
</tr>
</thead>
<tbody>
<tr>
<td>x 1.3</td>
<td>x 2.6</td>
</tr>
</tbody>
</table>
For problems 1 – 4, multiply the decimals.

1) \(0.45 \times 0.6 = 0.27\)
2) \(1.37 \times 0.3 = 0.411\)
3) \(2.7 \times 1.6 = 4.32\)
4) \(0.028 \times 1.02 = 0.02856\)

For problems 5 – 8, cross multiply to see if the fractions are equal.

5) \(\frac{1}{3} \times \frac{8}{24} = \frac{3}{4} \times \frac{6}{9} \) \(\Rightarrow\) \(1 \times 24 = 3 \times 8\)
6) \(\frac{3}{4} \times \frac{6}{9} = \frac{11}{12} \times \frac{22}{24} \) \(\Rightarrow\) \(3 \times 9 = 4 \times 6\)
7) \(\frac{11}{12} \times \frac{22}{24} = \frac{3}{5} \times \frac{15}{25} \) \(\Rightarrow\) \(11 \times 24 = 12 \times 22\)
8) \(\frac{3}{5} \times \frac{15}{25} = \frac{3}{25} \times \frac{5 \times 15}{75} \) \(\Rightarrow\) \(3 \times 25 = 5 \times 15\)

Equal \hspace{1cm} Not Equal \hspace{1cm} Equal \hspace{1cm} Equal

For problems 9 – 12, find the missing number by cross multiplying. Your answers will be integers (whole numbers.)

9) \(\frac{1}{2} = \frac{8}{y} \) \(\Rightarrow\) \(\frac{2}{16} = \frac{12}{9} \) \(\Rightarrow\) \(y = 16\)
10) \(\frac{3}{4} = \frac{x}{16} \) \(\Rightarrow\) \(x = 12\)
11) \(\frac{3}{13} = \frac{6}{t} \) \(\Rightarrow\) \(t = 26\)
12) \(\frac{3}{7} = \frac{x}{21} \) \(\Rightarrow\) \(x = 9\)

For problems 13 – 16, find the missing number by cross multiplying. Your answers will have fractions/decimals.

13) \(\frac{2}{5} = \frac{7}{a} \) \(\Rightarrow\) \(a = \frac{35}{2} = 17.5\) or \(17\frac{1}{2}\)
14) \(\frac{3}{10} = \frac{b}{12} \) \(\Rightarrow\) \(b = \frac{36}{10} = 3.6\) or \(3\frac{3}{5}\)
15) \(\frac{c}{4} = \frac{7}{10} \) \(\Rightarrow\) \(c = \frac{28}{10} = 2.8\) or \(2\frac{4}{5}\)
16) \(\frac{5}{6} = \frac{9}{z} \) \(\Rightarrow\) \(z = \frac{54}{9} = 6\) or \(6\frac{2}{3}\)
For problems 17 – 20, use the percent equation to solve.

17) What is the percent equation?
\[
\frac{a}{b} = \frac{p}{100}
\]

18) 15 is what % of 90?
\[
\frac{15}{90} = \frac{p}{100} \\
16.67 = p
\]

19) What is 70% of 60?
\[
\frac{a}{60} = \frac{70}{100} \\
a = 42
\]

20) 40 is 10 % of what?
\[
\frac{40}{b} = \frac{10}{100} \\
b = 400
\]

For problems 21 – 25, fill in table.

<table>
<thead>
<tr>
<th>Percent</th>
<th>Fraction</th>
<th>Decimal</th>
<th>Square Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>21) 79%</td>
<td>(\frac{79}{100})</td>
<td>0.79</td>
<td></td>
</tr>
</tbody>
</table>

| 22) 14% | \(\frac{14}{100}\) | 0.14 | |

| 23) 103% | \(\frac{3}{100}\) | 1.03 | |
For problems 21 – 25, fill in table.

<table>
<thead>
<tr>
<th>Percent</th>
<th>Fraction</th>
<th>Decimal</th>
<th>Square Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>117%</td>
<td>$\frac{117}{100}$</td>
<td>1.17</td>
<td></td>
</tr>
<tr>
<td>8 %</td>
<td>$\frac{8}{100}$</td>
<td>0.08</td>
<td></td>
</tr>
</tbody>
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BONUS QUESTIONS:

<table>
<thead>
<tr>
<th>Equation</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>$16 \times 1.3$</td>
<td>0.056</td>
</tr>
<tr>
<td>$x \times 2.6$</td>
<td>0.1456</td>
</tr>
</tbody>
</table>