

Mathematics

Long division

(MIE) Textbook Part 1

Page 29 Exercise 7

<p>a)</p> $ \begin{array}{r} \\ \underline{13} \overline{) 169} \\ \underline{- 13} \\ 39 \\ \underline{- 39} \\ 0 \end{array} $	$ \begin{array}{l} 1 \times 13 = 13 \\ 2 \times 13 = 26 \\ 3 \times 13 = 39 \end{array} $	$ \begin{array}{r} 13 \\ +\underline{13} \\ 26 \\ +\underline{13} \\ 39 \end{array} $
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<p>b)</p> $ \begin{array}{r} \\ \underline{14} \overline{) 420} \\ \underline{- 42} \\ 00 \\ \underline{- 00} \\ 0 \end{array} $	$ \begin{array}{l} 1 \times 14 = 14 \\ 2 \times 14 = 28 \\ 3 \times 14 = 42 \end{array} $	$ \begin{array}{r} 14 \\ +\underline{14} \\ 28 \\ +\underline{14} \\ 42 \end{array} $
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<p>c)</p> $ \begin{array}{r} \\ \underline{12} \overline{) 828} \\ \underline{- 72} \\ 108 \\ \underline{- 108} \\ 0 \end{array} $	$ \begin{array}{l} 1 \times 12 = 12 \\ 2 \times 12 = 24 \\ 3 \times 12 = 36 \\ 4 \times 12 = 48 \\ 5 \times 12 = 60 \\ 6 \times 12 = 72 \\ 7 \times 12 = 84 \\ 8 \times 12 = 96 \\ 9 \times 12 = 108 \end{array} $	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">12</td> <td style="width: 50%;">60</td> </tr> <tr> <td>$+\underline{12}$</td> <td>$+\underline{12}$</td> </tr> <tr> <td>24</td> <td>72</td> </tr> <tr> <td>$+\underline{12}$</td> <td>$+\underline{12}$</td> </tr> <tr> <td>36</td> <td>84</td> </tr> <tr> <td>$+\underline{12}$</td> <td>$+\underline{12}$</td> </tr> <tr> <td>48</td> <td>96</td> </tr> <tr> <td>$+\underline{12}$</td> <td>$+\underline{12}$</td> </tr> <tr> <td>60</td> <td>108</td> </tr> </table>	12	60	$+\underline{12}$	$+\underline{12}$	24	72	$+\underline{12}$	$+\underline{12}$	36	84	$+\underline{12}$	$+\underline{12}$	48	96	$+\underline{12}$	$+\underline{12}$	60	108
12	60																			
$+\underline{12}$	$+\underline{12}$																			
24	72																			
$+\underline{12}$	$+\underline{12}$																			
36	84																			
$+\underline{12}$	$+\underline{12}$																			
48	96																			
$+\underline{12}$	$+\underline{12}$																			
60	108																			

<p>d)</p> $ \begin{array}{r} \\ \underline{19} \overline{) 1691} \\ \underline{- 152} \\ 171 \\ \underline{- 171} \\ 0 \end{array} $	$ \begin{array}{l} 1 \times 19 = 19 \\ 2 \times 19 = 38 \\ 3 \times 19 = 57 \\ 4 \times 19 = 76 \\ 5 \times 19 = 95 \\ 6 \times 19 = 114 \\ 7 \times 19 = 133 \\ 8 \times 19 = 152 \\ 9 \times 19 = 171 \end{array} $	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">19</td> <td style="width: 50%;">95</td> </tr> <tr> <td>$+\underline{19}$</td> <td>$+\underline{19}$</td> </tr> <tr> <td>38</td> <td>114</td> </tr> <tr> <td>$+\underline{19}$</td> <td>$+\underline{19}$</td> </tr> <tr> <td>57</td> <td>133</td> </tr> <tr> <td>$+\underline{19}$</td> <td>$+\underline{19}$</td> </tr> <tr> <td>76</td> <td>152</td> </tr> <tr> <td>$+\underline{19}$</td> <td>$+\underline{19}$</td> </tr> <tr> <td>95</td> <td>171</td> </tr> </table>	19	95	$+\underline{19}$	$+\underline{19}$	38	114	$+\underline{19}$	$+\underline{19}$	57	133	$+\underline{19}$	$+\underline{19}$	76	152	$+\underline{19}$	$+\underline{19}$	95	171
19	95																			
$+\underline{19}$	$+\underline{19}$																			
38	114																			
$+\underline{19}$	$+\underline{19}$																			
57	133																			
$+\underline{19}$	$+\underline{19}$																			
76	152																			
$+\underline{19}$	$+\underline{19}$																			
95	171																			

$$\begin{array}{r}
 \text{e)} \quad \begin{array}{cccc}
 & 0 & 0 & \mathbf{8\ 3} \\
 \hline
 14 & 1 & 1 & 6\ 2 \\
 - & 1 & 1 & 2 \\
 \hline
 & & & 4\ 2 \\
 & & - & 4\ 2 \\
 \hline
 & & & 0
 \end{array}
 \end{array}$$

$$\begin{array}{l}
 1 \times 14 = 14 \\
 2 \times 14 = 28 \\
 3 \times 14 = 42 \\
 4 \times 14 = 56 \\
 5 \times 14 = 70 \\
 6 \times 14 = 84 \\
 7 \times 14 = 98 \\
 8 \times 14 = 112 \\
 9 \times 14 = 126
 \end{array}$$

$$\begin{array}{r}
 14 \\
 \hline
 +14 \\
 28 \\
 \hline
 +14 \\
 42 \\
 \hline
 +14 \\
 56 \\
 \hline
 +14 \\
 70
 \end{array}
 \quad
 \begin{array}{r}
 70 \\
 \hline
 +14 \\
 84 \\
 \hline
 +14 \\
 98 \\
 \hline
 +14 \\
 112 \\
 \hline
 +14 \\
 126
 \end{array}$$

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$$\begin{array}{r}
 \text{a)} \quad \begin{array}{ccc}
 & 0 & \mathbf{5\ 8} \\
 \hline
 14 & 8 & 1\ 2 \\
 - & 7 & 0 \\
 \hline
 & 1 & 1\ 2 \\
 - & 1 & 1\ 2 \\
 \hline
 & & 0
 \end{array}
 \end{array}$$

$$\begin{array}{l}
 1 \times 14 = 14 \\
 2 \times 14 = 28 \\
 3 \times 14 = 42 \\
 4 \times 14 = 56 \\
 5 \times 14 = 70 \\
 6 \times 14 = 84 \\
 7 \times 14 = 98 \\
 8 \times 14 = 112
 \end{array}$$

$$\begin{array}{r}
 14 \\
 \hline
 +14 \\
 28 \\
 \hline
 +14 \\
 42 \\
 \hline
 +14 \\
 56 \\
 \hline
 +14 \\
 70
 \end{array}
 \quad
 \begin{array}{r}
 70 \\
 \hline
 +14 \\
 84 \\
 \hline
 +14 \\
 98 \\
 \hline
 +14 \\
 112
 \end{array}$$

$$\begin{array}{r}
 \text{b)} \quad \begin{array}{cccc}
 & 0 & \mathbf{3\ 3\ 6} \\
 \hline
 25 & 8 & 4 & 0\ 0 \\
 - & 7 & 5 & \\
 \hline
 & 9 & 0 & \\
 - & 7 & 5 & \\
 \hline
 & 1 & 5 & 0 \\
 - & 1 & 5 & 0 \\
 \hline
 & & & 0
 \end{array}
 \end{array}$$

$$\begin{array}{l}
 1 \times 25 = 25 \\
 2 \times 25 = 50 \\
 3 \times 25 = 75 \\
 4 \times 25 = 100 \\
 5 \times 25 = 125 \\
 6 \times 25 = 150
 \end{array}$$

$$\begin{array}{r}
 25 \\
 \hline
 +25 \\
 50 \\
 \hline
 +25 \\
 75 \\
 \hline
 +25 \\
 100 \\
 \hline
 +25 \\
 125
 \end{array}
 \quad
 \begin{array}{r}
 125 \\
 \hline
 +25 \\
 150
 \end{array}$$

$$\begin{array}{r}
 \text{c)} \quad \begin{array}{cccc}
 & 0 & 0 & \mathbf{4\ 3} \\
 \hline
 68 & 2 & 9 & 2\ 4 \\
 - & 2 & 7 & 2 \\
 \hline
 & & 2 & 0\ 4 \\
 - & & 2 & 0\ 4 \\
 \hline
 & & & 0
 \end{array}
 \end{array}$$

$$\begin{array}{l}
 1 \times 68 = 68 \\
 2 \times 68 = 136 \\
 3 \times 68 = 204 \\
 4 \times 68 = 272 \\
 5 \times 68 = 340
 \end{array}$$

$$\begin{array}{r}
 68 \\
 \hline
 +68 \\
 136 \\
 \hline
 +68 \\
 204 \\
 \hline
 +68 \\
 272 \\
 \hline
 +68 \\
 340
 \end{array}$$

d)

	0	2	8	8	3
12	3	4	5	9	6
-	2	4		↓	↓
	1	0	5	↓	↓
-	9	6		↓	↓
		9	9	↓	↓
-	9	6		↓	↓
		3	6	↓	↓
-	3	6		↓	↓
		0			

1	x	12	=	12
2	x	12	=	24
3	x	12	=	36
4	x	12	=	48
5	x	12	=	60
6	x	12	=	72
7	x	12	=	84
8	x	12	=	96
9	x	12	=	108

12		60
<u>+12</u>		<u>+12</u>
24		72
<u>+12</u>		<u>+12</u>
36		84
<u>+12</u>		<u>+12</u>
48		96
<u>+12</u>		<u>+12</u>
60		108

e)

	0	0	7	4	6
33	2	4	6	1	8
-	2	3	1	↓	↓
	1	5	1	↓	↓
-	1	3	2	↓	↓
		1	9	8	↓
-	1	9	8		↓
		0			

1	x	33	=	33
2	x	33	=	66
3	x	33	=	99
4	x	33	=	132
5	x	33	=	165
6	x	33	=	198
7	x	33	=	231
8	x	33	=	264

33		165
<u>+33</u>		<u>+33</u>
66		198
<u>+33</u>		<u>+33</u>
99		231
<u>+33</u>		<u>+33</u>
132		264
<u>+33</u>		
165		