

NS3-24: Adding 3-Digit Numbers

Marzuk adds $142 + 275$ using base ten materials.

142	=	1 hundred <div style="text-align: center; border: 1px solid black; width: 40px; height: 40px; margin: 0 auto;"></div>	+	4 tens <div style="text-align: center; border: 1px solid black; width: 10px; height: 20px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 10px; height: 20px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 10px; height: 20px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 10px; height: 20px; display: inline-block;"></div>	+	2 ones <div style="text-align: center; border: 1px solid black; width: 15px; height: 15px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 15px; height: 15px; display: inline-block;"></div>
+ 275	=	2 hundreds <div style="text-align: center; border: 1px solid black; width: 40px; height: 40px; display: inline-block; margin-right: 10px;"></div> <div style="text-align: center; border: 1px solid black; width: 40px; height: 40px; display: inline-block;"></div>	+	7 tens <div style="text-align: center; border: 1px solid black; width: 10px; height: 20px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 10px; height: 20px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 10px; height: 20px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 10px; height: 20px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 10px; height: 20px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 10px; height: 20px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 10px; height: 20px; display: inline-block;"></div>	+	5 ones <div style="text-align: center; border: 1px solid black; width: 15px; height: 15px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 15px; height: 15px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 15px; height: 15px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 15px; height: 15px; display: inline-block;"></div>
	=	3 hundreds <div style="text-align: center; border: 1px solid black; width: 40px; height: 40px; display: inline-block; margin-right: 10px;"></div> <div style="text-align: center; border: 1px solid black; width: 40px; height: 40px; display: inline-block; margin-right: 10px;"></div> <div style="text-align: center; border: 1px solid black; width: 40px; height: 40px; display: inline-block;"></div>	+	11 tens <div style="text-align: center; border: 1px solid black; width: 10px; height: 20px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 10px; height: 20px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 10px; height: 20px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 10px; height: 20px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 10px; height: 20px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 10px; height: 20px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 10px; height: 20px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 10px; height: 20px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 10px; height: 20px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 10px; height: 20px; display: inline-block;"></div>	+	7 ones <div style="text-align: center; border: 1px solid black; width: 15px; height: 15px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 15px; height: 15px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 15px; height: 15px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 15px; height: 15px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 15px; height: 15px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 15px; height: 15px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 15px; height: 15px; display: inline-block;"></div>

Then, to get the final answer, Marzuk regroup 10 tens as 1 hundred.

	=	4 hundreds <div style="text-align: center; border: 1px solid black; width: 40px; height: 40px; display: inline-block; margin-right: 10px;"></div> <div style="text-align: center; border: 1px solid black; width: 40px; height: 40px; display: inline-block; margin-right: 10px;"></div> <div style="text-align: center; border: 1px solid black; width: 40px; height: 40px; display: inline-block; margin-right: 10px;"></div> <div style="text-align: center; border: 1px solid black; width: 40px; height: 40px; display: inline-block;"></div>	+	1 ten <div style="text-align: center; border: 1px solid black; width: 10px; height: 20px; display: inline-block;"></div>	+	7 ones <div style="text-align: center; border: 1px solid black; width: 15px; height: 15px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 15px; height: 15px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 15px; height: 15px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 15px; height: 15px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 15px; height: 15px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 15px; height: 15px; display: inline-block; margin-right: 5px;"></div> <div style="text-align: center; border: 1px solid black; width: 15px; height: 15px; display: inline-block;"></div>
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1. Add the numbers using base ten materials or a picture (and record your work below).

a) $242 = \underline{2}$ hundreds + $\underline{4}$ tens + $\underline{2}$ ones

$+ 384 = \underline{3}$ hundreds + $\underline{8}$ tens + $\underline{4}$ ones

$= \underline{5}$ hundreds + $\underline{12}$ tens + $\underline{6}$ ones

after regrouping $= \underline{6}$ hundreds + $\underline{2}$ tens + $\underline{6}$ ones

b) $394 = \underline{\quad}$ hundreds + $\underline{\quad}$ tens + $\underline{\quad}$ ones

$+ 531 = \underline{\quad}$ hundreds + $\underline{\quad}$ tens + $\underline{\quad}$ one

$= \underline{\quad}$ hundreds + $\underline{\quad}$ tens + $\underline{\quad}$ ones

after regrouping $= \underline{\quad}$ hundreds + $\underline{\quad}$ tens + $\underline{\quad}$ ones

c) $156 = \underline{\quad}$ hundred + $\underline{\quad}$ tens + $\underline{\quad}$ ones

$+ 483 = \underline{\quad}$ hundreds + $\underline{\quad}$ tens + $\underline{\quad}$ ones

$= \underline{\quad}$ hundreds + $\underline{\quad}$ tens + $\underline{\quad}$ ones

after regrouping $= \underline{\quad}$ hundreds + $\underline{\quad}$ tens + $\underline{\quad}$ ones