

# Logic Design – Tutorial

## 02

# Complements

#	Student ID	Student Name	Grade (10)
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Q6	<p>If the numbers <math>(+9,742)_{10}</math> and <math>(+641)_{10}</math> are in signed magnitude format, their sum is <math>(+10,383)_{10}</math> and requires five digits and a sign. Convert the numbers to signed-10's-complement form and find the following sums:</p> <p>(c) <math>(-9,742) + (+641)</math>                      (d) <math>(-9,742) + (-641)</math></p>
Sol 6	<p><math>+9742 \rightarrow 009742 \rightarrow 990257</math> (9's comp) <math>\rightarrow 990258</math> (10s) comp <math>+641 \rightarrow 000641 \rightarrow 999358</math> (9's comp) <math>\rightarrow 999359</math> (10s) comp</p> <p>(c) <math>-9742) + (+641) = 990258 + 000641 = 990899</math> (negative) Magnitude: 009101 Result: <math>(-9742) + (641) = -9101</math></p> <p>(d) <math>(-9742) + (-641) = 990258 + 999359 = 989617</math> (Negative) Magnitude: 10383 Result: <math>(-9742) + (-641) = -10383</math></p>