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# MATHCOUNTS®

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2014

■ Chapter Competition ■

Target Round

Problems 5 & 6

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5. \_\_\_\_\_ Each term in the sequence that begins 13, 9, 18, ... is the sum of three times the tens digit and two times the units digit of the previous term. What is the greatest value of any term in this sequence?

6. \_\_\_\_\_ cm In square ABCD, shown here, sector BCD was drawn with a center C and  $BC = 24$  cm. A semicircle with diameter AE is drawn tangent to the sector BCD. If points A, E and D are collinear, what is AE?

