



University of North Georgia
Mathematics Tournament
April 7, 2018

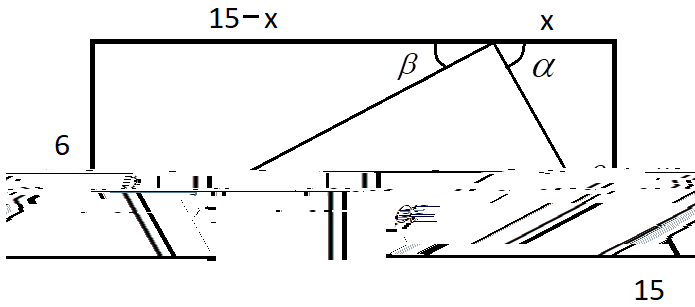
Solutions for the Afternoon Team Competition

"

Tqwpf"3"

Htq o "vjg" hkiwtg" dgnqy < vcp $D \frac{8}{x} \frac{37x}{8}$ 0 "" Uk o rnk{ kpi " ikxgu" 58 37x x⁴ "cpf" vjgp"

x⁴ 37x 58 2 0 "" Uqnxkpi" ikxgu" x 5qt x 34 0 "" Uq" vcp $D \frac{8}{x} \frac{8}{34} \frac{3}{4}$ "qt" vcp $D \frac{8}{x} \frac{8}{5} 40$ "



"

"

Tqwpf"4"

Wug"cu" o cp{ "34"nd0"dc iu"cu" rquukdng. "cpf"ngv"vjg" icr"dg"uq o g"pw o dgt"vjcv"yknn"dg"hkngf"wr"d{"c" eq o dkpcvkqp"qh"3: "nd0"cpf"44"nd0"dc iu0""3222"fkxkfgf"d{"34"ikxgu": 5"315."uq"vt{" : 2"cpf"igv": 2,34 ;82" ngcxkpi" c" icr"qh"62"dc iu0""Uq" {qw"pggf": 2"34"nd0"dc iu. "3"3: "nd0"dc i. "cpf"3"44"nd0"dc i "hqt" c"vqvcn"qh": 4" dc iu0"

"

"

"

Kh" {qw"pggf"vjku"fqew o gpv"kp"cpqvjgt"hqt o cv."rngcug"g o ckn"

Tqwpf"32"

"

Ukpeg"vjg"uw o "qh"vjg"uswctgu"qh"vjg"ukfgu"qh"c"tki jv"vtkcping"ku"79:."yg"jcxg" $a^4 b^4 c^4$ 79:0""

Uwduvkvwvki" $a^4 b^4$ hqt" c^4 "ikxgu" $a^4 b^4 a^4 b^4$ 79:0""Eq o d k p k p i "v g t o u" i k x g u" $4a^4 4b^4$ 79: c p f"

$a^4 b^4$ 4:; """"*3+0"

Ukpeg"vjg"rgtk o g v g t "q h "v j g "t k i j v "v t k c p i n g "k u "62."y g "j c x g" $a b c$ 62 0""Uwduvkvwvki"hqt"i k x g u"

√

Kh" { q w " p g g f " v j k u " f q e w o g p v " k p " c p q v j g t " h q t o c v . " r n g c u g " g o c k n " [o k p u w 0 m k o B w p i 0 g f w](#) " q t " e c m " 89 : / 939 / 57680 "

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