

# Enormous Leaning Square Math Olympiad

Year: **2019**



8<sup>th</sup> **ELSMO**  
PITTSBURGH, PA



Day: **1**

Saturday, June 8, 2019  
1:15 PM – 5:45 PM

*(A large, dense, and highly rotated block of text, likely a watermark or a large-scale mathematical problem, is present here. The text is mostly illegible due to its extreme rotation and density.)*

*(A smaller, rotated block of text, possibly a watermark or a small-scale mathematical problem, is present here. The text is mostly illegible due to its rotation.)*

Time limit: 4 hours 30 minutes.  
Each problem is worth 7 points.

# Enormous Leaning Square Math Olympiad

Year: 2019



8<sup>th</sup> ELSMO  
PITTSBURGH, PA



Day: 2

Sunday, June 16, 2019  
1:15 PM – 5:45 PM

P t  
r o n i c a i c l l C c o 5 a a e o g i f , n d t t f l a e n s g e i s =  
b o r n l n s a a d r m l . i r t t a . f f b , m d e e t t f l a e n s g e i s =  
l n c o l n s o l c l e t l e t n h y C e r e t u f s t h e a i n o s t y o x e i n h a  
e - l r s d s e i l e e y h e r w e m s g t x t e h e l f c o f f a s o i n  
m p e m t a n i s c r i t g e d n e a e r e i e h e e q n C f o f f a s o i n  
a a r g n n l - S r i m s l e r w e i n h l d a t p d e s q n C f o f f a s o i n  
4 r w l a p o e 2 b s s b e e i n h l d a t p d e s q n C f o f f a s o i n  
l i s g i h n h o w l e s i r t e t m c c f d e i r e t e u a a 2 s n u l t u m f S  
C l n t h r h n w 3 a o n c a f t o i m p w t l a f o r c x t i t Z i t y c ?  
a e r t t o a s w i b s s b e e i n h l d a t p d e s q n C f o f f a s o i n  
l h i d P g e r o i n h ) + p o e s a l t o c i f n s h i s o i . n o b i  
i l e g g , h u s n o a l r f s a a l t o c i f n s h i s o i . n o b i  
s n p t e c p a c e s e n i m S a f e s c a ( n n n o u h x o ) o . n S a t n  
g s a d h n p o a i m p f e s i f n i t t d b t E t d , s 2 n a i q X e  
v l e e c t r p t e d e t o g a s i f n i t t d b t E t d , s 2 n a i q X e  
n i . , h r a a r s o y r e l t s u i x o i t n 0 o . a s o . n f 2 h 2 f L h h a ( a  
t I C , u l s i a a d e n s o a i t , o o . a s o . n f 2 h 2 f L h h a ( a  
h 2 a l v i s l ) g e r . o ( a n d t n n 2 f , H d : a . f x c m C n C n  
e l d h n o h a f n n S o e a e . p . f b i h t R n . u l i X a a C n  
d 3 t s a e l w i a r o P p t o d . n . l m . a s i l y R c F i x , n R c h C o  
i s a o a l w . t l b i e i o d r p s f t c n c S c i a = h e n h l a  
t n n i l ( h t l c n w i b e t v l s r v o i ) o d h c e l 0 e t h t c  
i d t p e n a t i e i e m v s S t i e s i a n o , n e t s a e , i h i o h /  
n t p e n a t i e i e m v s S t i e s i a n o , n e t s a e , i h i o h /  
c a o e e r r t e s , h d m i n r n a i o a o p u h e a s o /

T d o e p n s a n b o d a e e n  
h f l t r i m o n a f f t l n r s f ( V  
s o o s a n y n e r g l i f o V .  
e r w f s l ) t x p a r - i x ) n s , .  
m i i f i r n - e i u n ) W  
c a n f o o s i i r n - e i u n ) W  
a l g u n n u x s e y , i r p i t t +  
n l u n s e c e i o t s e f i t t +  
n l y w c h d a s p i o t s o h W  
b e i y a t i ( b t r f o s h e i a n V  
e i y o n t y h e u n i e f o a l s -  
d e t t a h i t l c ( v a n , d e o W  
f h h l e n c ( c i e r c i t a W p a ,  
i e e m l i o o i i a i n r r a  
n e f s x i u ) n n ) i a i n r r a

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