

1.

$4 \times 4$   
 $\sqrt{30}$   
 $m \perp on$

$\frac{60}{100} = \frac{10+x}{30+(10+x)}$

$a^2 + b^2 = c^2$   
 $a^2 + 4^2 = 5^2$   
 $a^2 = 9$   
 $a = 3$

$45-45-90$   
 $n \quad n \quad n\sqrt{2}$   
 $n\sqrt{2} = 4$   
 $n = \frac{4}{\sqrt{2}} = 2\sqrt{2}$

$\frac{d_1 d_2}{2} = \frac{4 \cdot 4}{2} = 8$   
 $A = ?$

$(-5, 12)$   
 $(0, 0)$   
 $\{5, 12, 13\}$   
 $5^2 + 12^2 = c^2$

$\sqrt{(12-0)^2 + (-5-0)^2} = d$   
 $\sqrt{(4y)^2 + (4x)^2} = d$

$1:25$   
 $1:27$

Apr 22-9:03 AM

2.

ex 7

$AE = 8$   
 $r = 5$   
 $3^2 + b^2 = 5^2$   
 $(3) 4-5$   
 $(6) 8-19$

ex 8

A)  $\frac{4}{3}$   
 B) 2  
 C) 3  
 D)  $4(\sqrt{2}+1)$   
 E)  $\frac{d}{\sqrt{2}+1}$

$\overline{AC}, \overline{BD}$  DIAG  $\rightarrow$   
 $4 \Delta$ 's  
 $P_{\Delta} = 1$   
 $P_{\square} = ?$   
 $\frac{4s}{n} \quad \frac{4s}{n} \quad \frac{4s}{n\sqrt{2}}$   
 $x \quad x \quad x\sqrt{2}$   
 $(2+\sqrt{2})x = 1$   
 $x = \frac{1}{2+\sqrt{2}}$

$360 = \text{sum } \Delta$ 'S QUAD  
 $(n-2)180$

Apr 22-9:20 AM

11.

A) 135  
 B) 125  
 C) 115  
 D) 65  
 E) 50

$180 - 65$

12.

100 estimate AT  
 100 DT  
 100 ET

13.

Apr 23-9:53 AM

3.

ex 14

$30-60-90$   
 $n \quad n\sqrt{3} \quad 2n$

ex 15

$XY < YZ < ZX$

ex 16

$30-60-90$   
 $n \quad 2n \quad 2n$

Apr 23-10:03 AM

4. ex 17.

18.  $Ox$   $(1,7)$

$A(1,1)$   $D(5,1)$   $C(11,5)$   
 $A_{RECT} - A_{DCI} - A_{DII}$

Apr 23-10:12 AM

TACTIC 5

A) -2	30
B) -1	20
C) 0	10
D) 1	5
E) 2	2

F 20.

A) 156	25,000
B) 152	75K
C) 146	100K
D) 144	125K
E) 142	150K

21.

$k: 3:b$   
 $1x + 3x + 6x = 250K$   
 $10x = 250,000$   
 $x = 25,000$

23.  $\frac{112}{2^n}$  INTEGER

A	1
B	2
C	3
D	4
E	5

$\frac{112}{2^5} = \frac{112}{32}$   
 $\frac{112}{2^7} = \frac{112}{128} = 7$   
 $\frac{112}{2^8} = \frac{112}{256} = 7$

Apr 25-7:34 AM

TACTIC 6.

$a = bc$   
 $900 = 90 \cdot 10$

A.  $\frac{a}{5c} = \frac{900}{5 \cdot 10} = 18$

$\frac{b}{c} = ?$  (9)

$b = 90$   
 $c = 10$

c)  $\frac{a}{c} = \frac{900}{10} = 90$

D.  $\frac{900}{10 \cdot 10} = 9$

Apr 25-7:50 AM

26.

A)  $\frac{5-12}{4}$  B)  $\frac{5+b}{4}$  C)  $\frac{5+b}{4}$  D)  $\frac{5+12}{4}$  E)  $\frac{5+16}{4}$

3k = 9 ✓

↑ CONSER. ADD INT. = S

3	X
5	X+2
7	X+4
9	X+6
24 = S	4X+12 = S

Apr 25-7:56 AM

27.  $\frac{5}{200} C$  CANS SOUP EACH WEEK PER STUDENT  
 $\frac{200}{1000} S$  STUDENTS IN SCHOOL 1000 CANS/WK  
 How many weeks will X CANS LAST?

A)  $\frac{CX}{S}$   $\frac{1000 \cdot 6}{200}$   
 B)  $\frac{XS}{C}$   $\frac{2000 \cdot 200}{5}$   
 C)  $\frac{S}{CX}$   $\frac{200}{2000 \cdot 5}$   
 D)  $\frac{X}{CS}$   $\frac{2000}{5 \cdot 200}$  2 WEEKS  
 E)  $\frac{CSX}{1000}$  WHICH ANSWER = 2?

Apr 25-8:02 AM

28. P PAINTERS h HOUSES IN d DAYS  
 How many houses do painters paint in 2 days?

PANTERS	HOUSES	DAYS
3	8	4
6	16	4
6	8	2

h=8  
 p=3  
 D)  $\frac{3}{8} = \frac{3 \cdot 8}{8 \cdot 3} = \frac{24}{24} = 1$   
 E)  $\frac{3 \cdot 3}{8} = \frac{9}{8}$

Apr 25-8:08 AM

29.  $X+Y+Z$   
 $X+Y-Z$   
 $X-Y-Z$   
 $Y-X-Z$   
 $Z-Y-X$

X YRS IN Y YRS  
 12 5  
 Z YEARS AGO?  
 4

30.  $a = b + \frac{1}{2}$   $b = 2c + \frac{1}{2}$   $c = 3d + \frac{1}{2}$   
 $d = 2$  A)  $\frac{a-2}{6} = 2$   
 B)  $b = 13.5$   
 C)  $c = 6.5$   
 D)  $d = 2$   
 E)  $\frac{60}{3} = 20$

ANNE r MPH h HOURS  
 r = 60 MPH  
 20 MIN 20 mi

Apr 25-8:21 AM

TACTIC 7. ex 32  $\frac{1}{4} \frac{1}{5} \rightarrow LCD = 20$

2003 2004  
 g 100 x 120 1.2  
 b 100 x 80 .8

$\frac{g}{b} = \frac{120}{80} = \frac{3}{2}$   
 $\frac{g}{b} = \frac{100}{100} = 1$

34. RACE = 24 MI  
 $\frac{1}{24}$  SWIM  $\rightarrow \frac{1}{24} \cdot 24 = 1$   
 $\frac{1}{3}$  RUN  $\rightarrow \frac{1}{3} \cdot 24 = 8$  RUN  
 BIKE 24 - 9 = 15  
 $\frac{15}{8}$  15:8

35. 2002  $\rightarrow$  2003  $\rightarrow$  2004  
 100 20 100  
 $\% \Delta = \frac{n-o}{o}$  (change original)  
 $\frac{100-20}{20} = \frac{80}{20} = 4 \times 100\% = 400\%$


Apr 28-8:40 AM

TACTIC 8.

1) 60%	}	LOOK FOR EQUIV UNLESS FORMAT COUNTS
2) .6		
3) 60/100		
4) 80%		
5) 70%		

Apr 28-8:52 AM

LARGEST  $\frac{1}{2} \pi r^2$



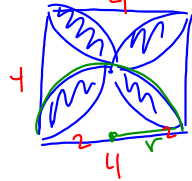
37.  $\frac{5+10+15+x}{4} = 20$

38.  $\frac{2S}{100} = \frac{x}{220}$        $\frac{5.5}{100} = \frac{55}{w}$   
 $x=55$        $w=1000$

39.  $\frac{27000}{3} \rightarrow 3 \text{ PEOPLE}$   
 9000

40. R:B  
 S:3      % ARE B?

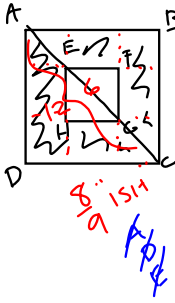
41.  $4:4 \rightarrow 50\%$   
 $5:3 < 50\%$



$A_{\square} = 4 \cdot 4 = 16$   
 ELIMINATE 716  
 ELIMINATE NEG

Apr 28-8:55 AM

42.



SHADE SQ       $\frac{72-18}{72} = \frac{3}{4}$

$A_{SQ} = \frac{d_1 d_2}{2} = \frac{d^2}{2}$   
 $36 \text{ small} = 18$   
 $144 \text{ LARGE} = 72$

8" 15th  
 4th

Apr 28-9:08 AM

43. 25¢ FOR EVERY 20¢  
 % TINY!  
 1% OF 20¢ = .20

44. 1990  $\rightarrow$  2000  
 ?  $\uparrow$  25%  
 W  
 EUM 1990  $\rightarrow$  2000  
 7W

Apr 28-9:14 AM

#9

$\frac{1}{4}\pi r^2 + \frac{1}{4}\pi r^2 = \frac{1}{2}\pi r^2$

$10 - \frac{1}{2}\pi r^2$   
 $\frac{1}{2}\pi(4) = 2\pi$   
 $10 - 2\pi$

#10

$P_{SHADDED} = \frac{SHADDED}{WHOLE}$   
 $9x^2 \rightarrow$

$\frac{x^2}{9x^2} = \frac{1}{9}$

#11

$B \text{ to } AP = ?$

$\sqrt{2}$

Apr 29-9:44 AM

TACTIC #10

S1.  $3x-7$      $3x-8$   
 $5(3x-7) = 20$     one less  
 $3x-7=4$

S2.

$$\begin{array}{r} 7x+3y=17 \\ + 3x+7y=19 \\ \hline 10x+10y=36 \\ 10(x+y)=36 \\ x+y=3.6 \end{array}$$

AVG  
 $\frac{x+y}{2}$

Apr 29-9:55 AM

TACTIC #11 UNITS!  
CIRCLE OR UNDERLINE

TACTIC #12  $(x - \frac{1}{x})(x + \frac{1}{x})$   
 $x^2 - \frac{1}{x^2}$

S6.  $a^3=3$      $a^5=12b^2$

$\frac{a^3=3}{a^5=12b^2}$   
 $\frac{1}{a^2} = \frac{1}{4b^2}$   
 $\sqrt[3]{a^3=3}$   
 $a=3\sqrt[3]{3}$   
 $a=x$

$\frac{a^2=4b^2}{a^5=12b^2}$   
 $\frac{a^2=4b^2}{a^5=12b^2}$   
 $\frac{a^2=4b^2}{a^5=12b^2}$   
 $\frac{a^2=4b^2}{a^5=12b^2}$   
 $\frac{a^2=4b^2}{a^5=12b^2}$

#13 WATCH ( )!  
 $(1 + 7/5)/(1 - 5/7)$

#14 MAKE A LIST OR PATTERNS  
 NOTE REPEATS SO YOU DON'T HAVE TO KEEP GOING

MATH ROCKS  
 R  
 T · 8 · 7 · 6 · 5  
 ELEPHANT    3 · 7 · 6 · 5

Apr 29-9:58 AM

TACTIC 15 -  
 COMPOSITE SHAPE  
 CANNOT COUNT LENGTH IF DIAGONAL  
 ANSWER SHEET = STRAIGHT EDGE

Apr 29-10:21 AM

TACTIC 16 397

64.  $a \odot b = \frac{\text{SUM}}{\text{DIFF}}$   
 $25 \odot 15 = \frac{25+15}{25-15}$

65-67  $X * Y = \frac{\text{PRODUCT}}{\text{SUM}} = \frac{XY}{X+Y}$   
 DISTRACTOR  $\rightarrow$  COMMON ERROR

$X * 5 = \frac{X * 10}{X+5}$   
 $5X - (X+5) = 10X - (X+10)$   
 $5X - X - 5 = 10X - X - 10$   
 $4X - 5 = 9X - 10$   
 $5 = 5X$   
 $1 = X$

$Y * Y = Y$   
 $YY - (Y+Y) = Y$   
 $Y^2 - 2Y = Y$   
 $Y^2 - 3Y = 0$   
 $Y(Y-3) = 0$   
 ~~$Y=0$~~   $Y-3=0$   
 $Y=3$  ANSWER (B)  
 NOT 0

68.  $C \# D = C^d + d^c$   
 $1 \# (2 \# 3) = ?$   
 FIRST<sup>SEC</sup> + SEC<sup>FIRST</sup>

May 1-7:31 AM

TACTIC 17.

$3X + 5Y = 14$   
 $+ X - Y = 6$   
 $4X + 4Y = 20$   
 ~~$4(X+Y) = 20$~~   
 $X+Y=5$

WHAT IS AVG  $X+Y$   
 $\frac{Y+X}{2}$

70.  $a-b+c=7$   $a+b-c=11$   $b-c=2$   
 $+ a+b-d=11$   $a-b+c=7$   $-b+c=-2$   
 $2a = 18$   $a=9$   $b-c=2$

71.  $a-b=1$   $c-a=d$   
 ~~$a-c=2$~~   $c-a=d$   
 $0 = 1+2+d$   
 $0 = 3+d$   
 $-3 = d$

May 1-7:45 AM