Section 2

1) C
2) C
3) E
4) A
5) B
6) C
7) B
8) A
9) E
10) C
11) C
12) C
13) D
14) C
15) B
16) D
17) A
18) B
19) C
20) A

Jul 29-9:11 AM

Section 2

7) $8^n = (2^3)^n$

$2^{3n} = 2^k$

$\frac{3n}{k} = \frac{k}{k}$

$3\frac{n}{k} = 1$

$\frac{n}{k} = \frac{1}{3}$

(B)

Jul 11-9:02 AM

8) 20% off = 80%

10% off 10% off

→ 90%

10% off 90%

90% of 90%

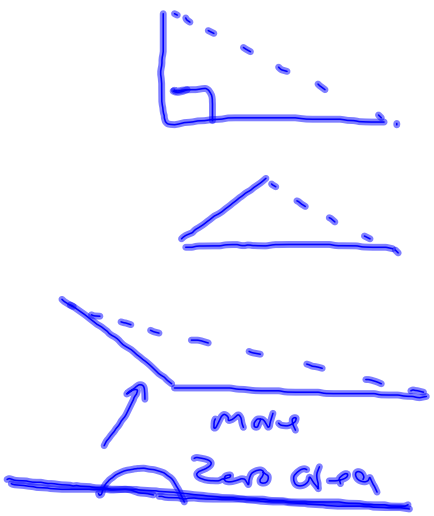
$.8(600) = \$480$

$.9(.9(600)) = \$486$

(A)

Jul 11-9:05 AM

10)



✓

$A = \frac{1}{2}(10)(7)$

$A = 35$

(C)

Jul 11-9:07 AM

11) G : P
5 : 3

120,000 ÷ 8 = 15,000

G 5(15,000) = 75,000
P 3(15,000) = 45,000

(C)

12) $5n + 3 \leq 14$

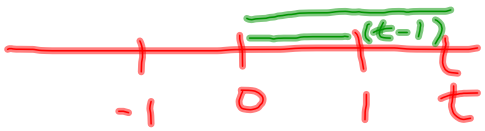
$5n \leq 11$

$n \leq 2.2$ $n = 1, 2$

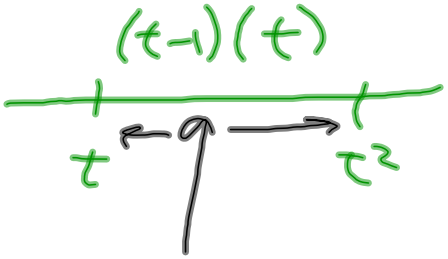
$\frac{2}{10}$ 20% $\frac{1}{5}$ (C)

Jul 11-9:11 AM

13) $t > 1$



$t^2 > t$



$(t^2 - t)$

$t(t-1)$

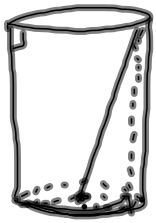
1.4 X 2

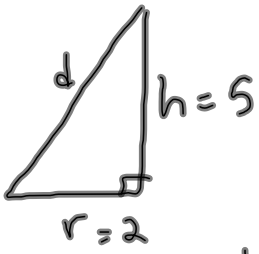
.4 X 2 = .8

2.8

Jul 11-9:18 AM

14)





$d = \sqrt{5^2+2^2}$

$= \sqrt{29}$ (C)

15) $p^2 - n^2 = 12$

$(p-n)(p+n) = 12$

$p-n=1 \quad p+n=12$ X

$p-n=2 \quad p+n=6$ ✓

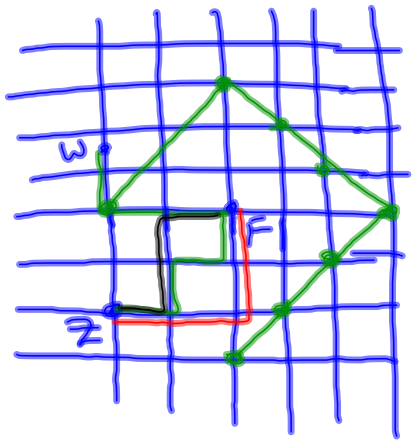
$p-n=4 \quad p+n=3$ x

4+2

(B)

Jul 11-9:25 AM

16) D



17) 6 (A)

18) (B)

19) $(2x)^{3y} - (2x)^y = (2x)^y(2x^{2y} - 1)$

let $y=3$ $(2x)^9 - (2x)^3 = (2x)^3(2x^6 - 1)$ (C)

Jul 11-9:34 AM

19) $x^9 - x^3 = x^3(x^6 - 1)$

Jul 29-9:34 AM

20) $0 < j < k < n$ consecutive

jn is odd ∴ eliminate B.D.

6 7 8

7 8 9

(A) 9 0 1 ✓

C 1 2 3

E 3 4 5

Jul 11-9:42 AM

Section 6

1) B
2) E
3) B
4) A
5) D
6) A
7) C
8) B
9) 108
10) 1/2
11) 1300
12) 24
13) 300
14) 11
15) 2/3
16) 3.5
17) 53
18) 70/3

Jul 29-9:41 AM

Section 6

1) 4, 11, 18

4, 4+7·1, 4+7·2 ... 4+7·11 = 81 (B)

(1, 2, 3, 12)

3) pretend t=15, y=15, w=15, x=15 — 15 (B)

$\frac{t+y}{2}=15$ $t+y=30$ $w+x=30$ $\frac{60}{4}=15$

60

Jul 11-9:46 AM

4) A

6) $\frac{a}{b}(bc+k)$

$\frac{1}{b}(abc+ak)$

$a\left(c+\frac{k}{b}\right)$

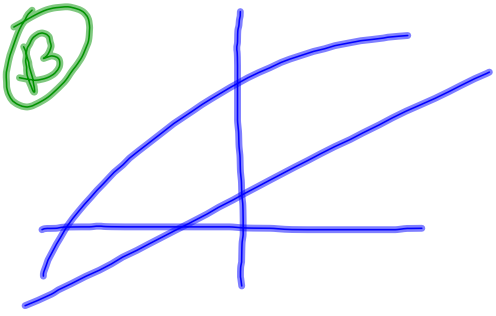
$ac+\frac{ak}{b} \Rightarrow \frac{abc+ak}{b}$

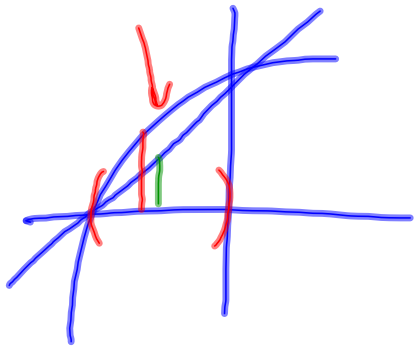
$\frac{a}{b}(k+bc)$

(A)

Jul 11-9:50 AM

8) (B)





9) $4 \times 12 = 48$

$2 \times 4 = 8$

$1 \times 52 = 52$

108 mgs

Jul 11-9:55 AM

11) End 3rd − End 2nd
6800 − 5500 = 1300 books

13) $(x+y)+3z = 600$
$(x+y)+z = 400$
$2(x+y)+4z = 1000$
$(x+y)+2z = 500$
(−1) $0+z = 100$
$\therefore x+y = 300$

$k+3z = 600$
$-3(k+z = 400)$
$-2k = -600$
$k = 300 = (x+y)$

Jul 11-9:59 AM

14) 25 − 15 = 10 w/ no cup
cups
25 − 21 = 4 w/ no plates
plates
14 missing 1
25 − 14 = 11 w/ both

15) $(-2,0)$ $(0,-3)$ $m = \frac{-3}{2}$
m for 1 line $= -\frac{1}{m}$
$\frac{2}{3}$

Jul 11-10:22 AM

16) $6 < |x-3| < 7$

if $x < 0$ $\quad x-3 < 0$

$6 < -(x-3) < 7$

$-6 > x-3 > -7$

$-3 > x > -4$

$|x| =$ (3.5)

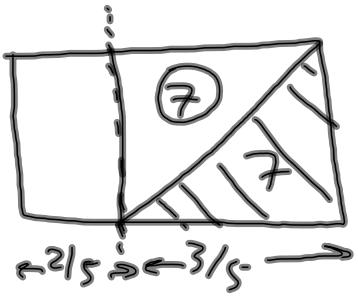
Jul 11-10:27 AM

17) (47) 49 50 51 (53)

7·7 3·17

$47.53 = 2491$

18)



$\frac{2}{5}A \quad \frac{3}{5}A = 14$

$A = \frac{70}{3}$

Jul 11-10:31 AM

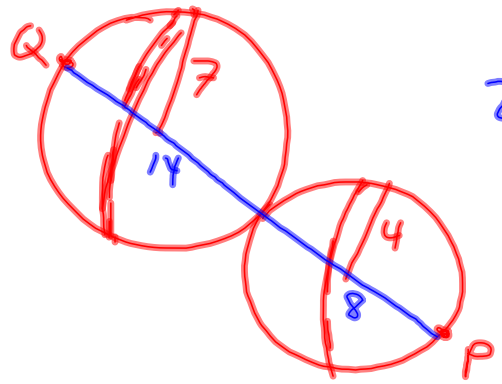
Section 8

1) C	9) B
2) A	10) C
3) B	11) D
4) B	12) B
5) C	13) B
6) D	14) D
7) E	15) E
8) B	16) D

Jul 29-10:35 AM

Section 8

7)

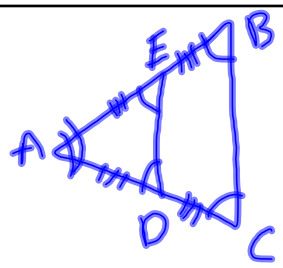


22 (E)

8) 500 members X 12 rentals = 6000
1000 X 15 = 1500
250 X 20 = 2500
9000

(B)

Jul 11-10:37 AM

9) 

$\frac{AB}{AE} = \frac{AC}{AD} \Rightarrow$ similar

$AE = x \quad AB = 2x$

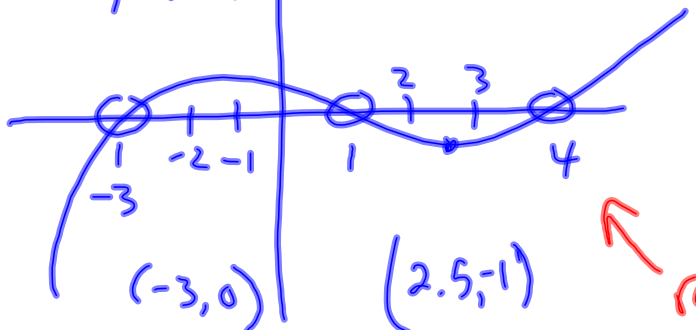
$ED = 4 \quad BC = 8$

(B)

10) Power of 2 $\left(\frac{1}{2}\right)$ (C)

Jul 11-10:43 AM

11) $y = f(x)$



(-3, 0)
(1, 0)
(4, 0)

(2.5, -1)

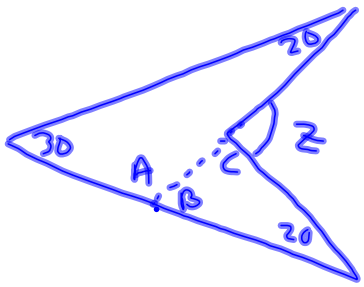
↑ random

ans is (D)

exactly 2 times

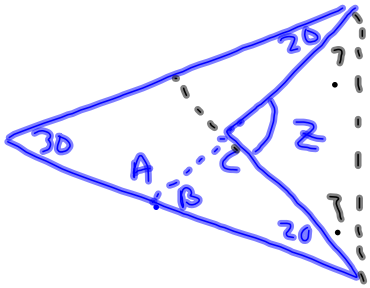
Jul 11-10:48 AM

12)



A=130
B=50
C=110
Z=70

(B)



no info about sides

Jul 11-10:50 AM

B) 8, 9, 10, 11, 12, 13, 14, 15

$\frac{x}{y} = \frac{2}{5} \Rightarrow 5x = 2y \Rightarrow x = \frac{2}{5}y$

$x = \frac{2}{5}(8)$ ✗

$x = \frac{2}{5}(10)$ ✓

$x = \frac{2}{5}(15)$ ✓

(2)

(B)

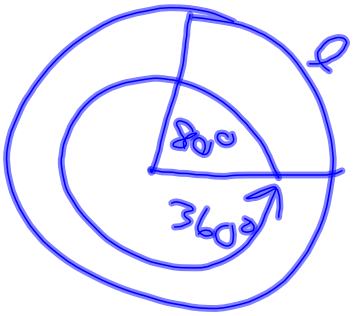
Jul 11-10:54 AM

14) $C_{Big} = 2\pi r = 36$

$r = \frac{18}{\pi}$

C_{small} $r = \frac{\frac{18}{\pi}}{2} = \frac{18}{\pi} \cdot \frac{1}{2} = \frac{9}{\pi}$

Circumference small $= 2\pi\left(\frac{9}{\pi}\right) = 18$



$l = \frac{80}{360}$(circumference)

$\left(\frac{8}{36}\right)(18) = 4$ (D)

Jul 11-10:58 AM

15) $(0, 120)$ $(10, 0)$ $m = \frac{120-0}{0-10} = -12$

$b = 120$

$y = -12x + 120$

$y - y_1 = m(x - x_1)$

$y - 0 = -12(x - 10)$

$y = -12x + 120$

16) $\nabla x = x + \frac{1}{x} = t$

$x = 1$ $t = 2$

$x = -1$ $t = -2$

(D)

Jul 11-11:01 AM