Test 4 section 2 (582)

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

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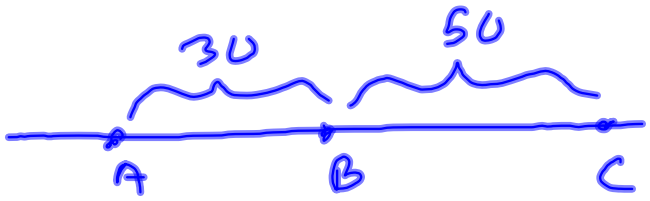
(2)

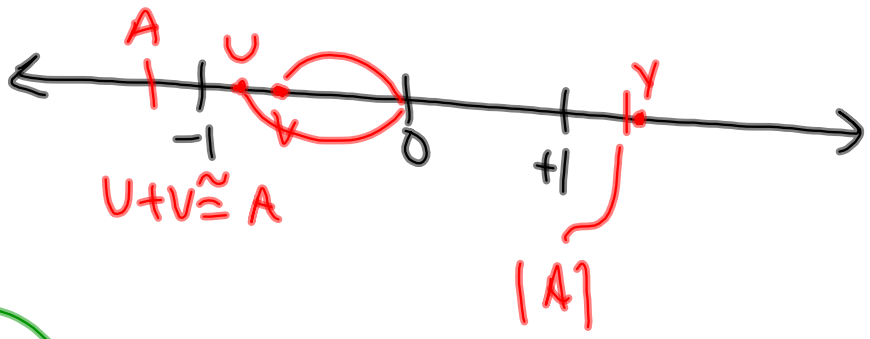


(D)

(5) $\frac{60, 60, 70, 70, 80}{5} = 68$ (C)

(6) $u+v < -1 > -2$

Closer to 1 $\leq$ (D)



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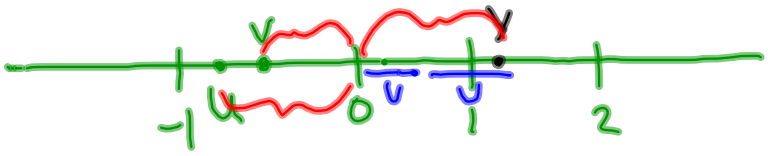
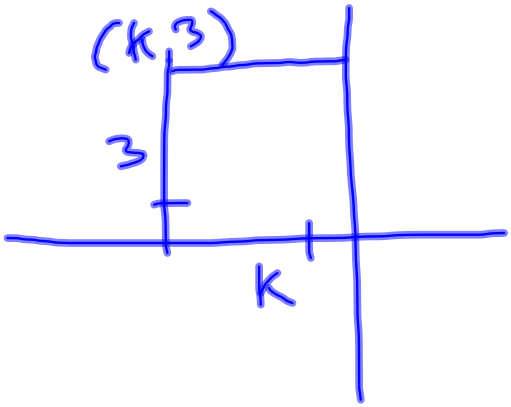


7) $\frac{1}{x} = 2$ $x - 1 = -\frac{1}{2}$

$\frac{1}{x-1} = -2$

(B)

8)



$k = -3$ (A)

9) E $f(0) = 2(0)^2 + 1 = 1$

$f(1) = 2(1)^2 + 1 = 3$

(A)

10) $age = x + y$

x is since then

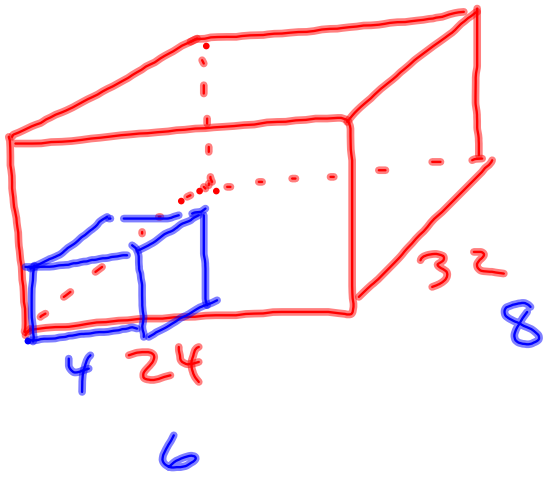
age then

(E)

11) z w y x
z y x w
z x w x
z y x w
w x y z ③ (B)

w x y z
x y w z

12)



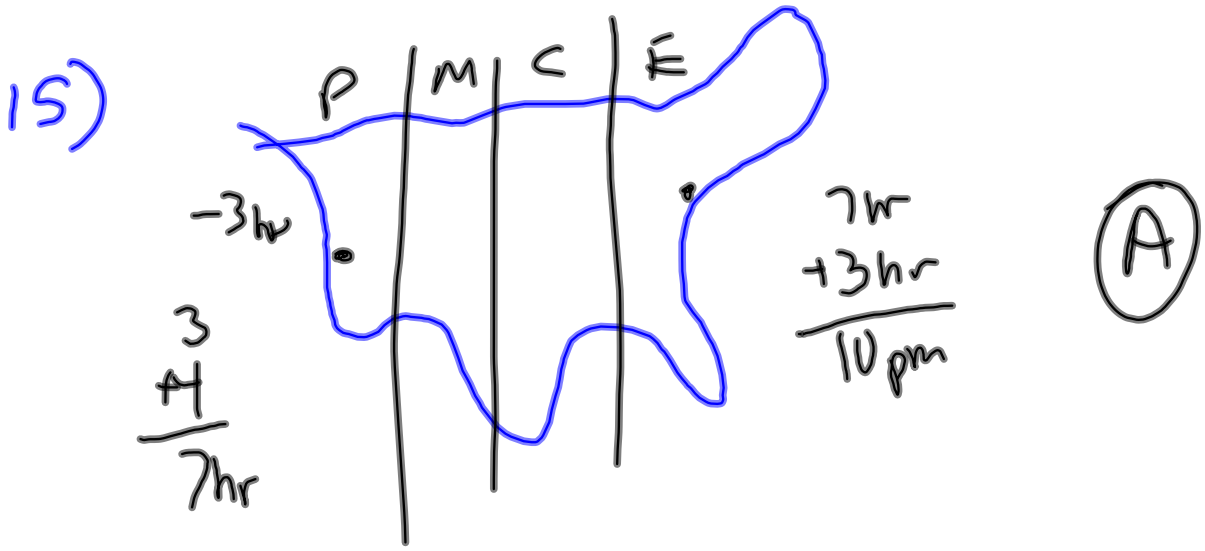
(D)

13) (F) n^2 is smaller b/c $n < 1$

14) C has median ("middle")

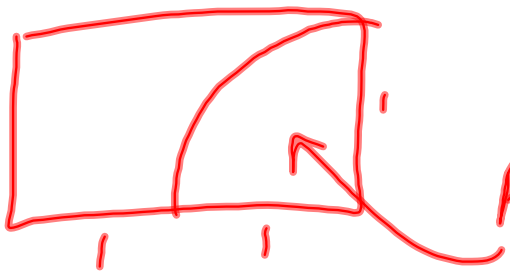
slope $m = \frac{rise}{run} = \frac{3}{4}$ (C)

15)



(A)

16)



$A_{rect} = 2$

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

$= \frac{1}{4}\pi$

$2 - 2\left(\frac{1}{4}\pi\right)$

$2 - \frac{1}{2}\pi$

(B)

17) $f(x-h)$ h is translation "side" in X

$f(x+2) \Rightarrow h=-2$ (C)

~~f(x)~~

$f(-1)=1$

$f(0)=1$

$f(1)=0$

$f(2)=1$

$f(3)=2$

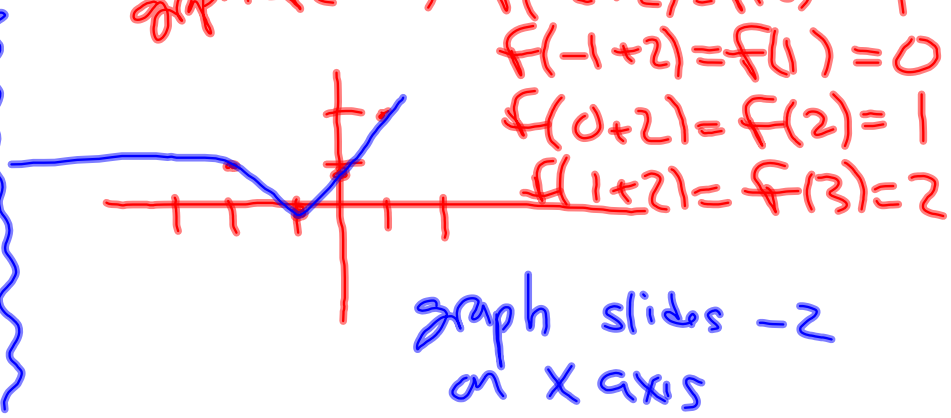
graph $f(x+2)$

$f(-2+2)=f(0)=1$

$f(-1+2)=f(1)=0$

$f(0+2)=f(2)=1$

$f(1+2)=f(3)=2$



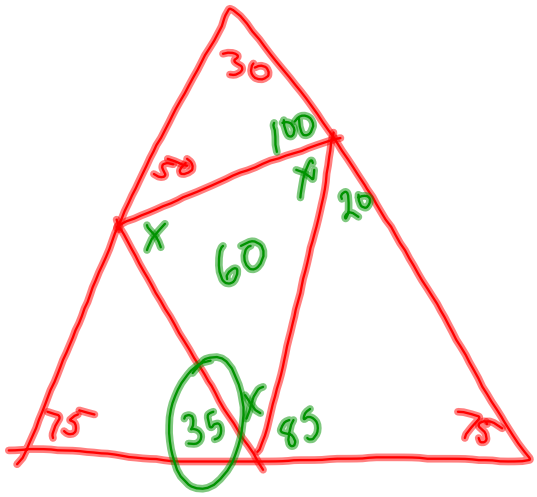
graph slides -2 on x axis

18) $\angle A = \angle C = 75^\circ$

$\angle D = \angle F = \angle E = 60^\circ$

$50 + x = 75 + b$

$x = 75 + a$



19) 

A) $ac = fb$

B) $fa = cb$ "cross mult"

C) $af = cb$

D) $af = cb$

E) $af = bc$

20) $1 \square 7 = (1)(7) - 7 = 0$

I duh:

II $(a+b)b - b$

$ab + b^2 - b$

nope

III $a(a+b) - (a+b)$

$a^2 + ab - a - b$

$a = 1$ $b =$ anything

$1 \square b = 0$

(E)

Test 4 section 4 (594)

1) E
2) A
3) B
4) E
5) D
6) A
7) B
8) B
9) 990
10) 30
11) 8, 10, 12
12) 3400
13) 450
14) 1/2, 0.5
15) 12
16) 5/11, .454, .455
17) 8
18) 16

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1) $x - y = 8$

$y = 3z$

$x - 3z = 8$

$z = 2$

$x - 3(2) = 8$

$x - 6 = 8$

$x = 14$

(E)

2)

(A)

3) $A_1 + A_2 = 5$

$\frac{A_1 + A_2}{2} = 2.5$

(B)

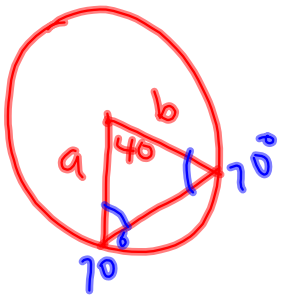
4) $1^2+1=2$

$2^2+1=5$ .... 10 17, ~~etc~~ ...

"one greater than a perfect square"

(E) $49+1$

5)



$a=b=$ radius

$\frac{180-40}{2}=70^\circ$

6) 9 16 121 (A)

$3 \cdot 3$ $4 \cdot 4$ $11 \cdot 11$

$2 \cdot 2$ $2 \cdot 2$

7) $\frac{1}{2} b h = A$

$\frac{1}{2}\left(\frac{6}{7} h\right) h = A$ (B)

$= \frac{6h^2}{14} = \frac{3h^2}{7}$

8) $(a^{\frac{1}{2}}b^{\frac{1}{3}})^6 = 432$

$a^3b^2 = 432$

$(ab)^2 < 432 < (ab)^3$

if $(ab) = 18$ eliminate a, d, e

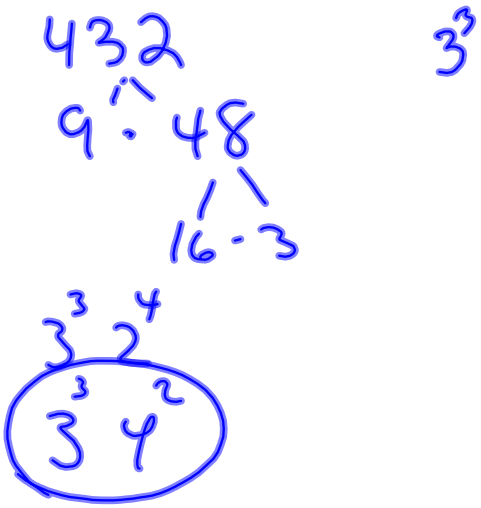
only $18^2 \cdot 1 < 432$

and $18^2 \cdot 1 \neq 432$

$\therefore$ 12 is sol

or notice $\frac{432}{12^2} = 3$ ↑ factor of 12

(B)



3^3

9) $100 \rightarrow 999$

990

10) $\frac{20}{4} = \frac{150}{x}$

$20x = 600 \Rightarrow x = 30$ lbs

11) $10 < n + .5n < 20$

$10 < 1.5n < 20$

$10 < \frac{3}{2}n < 20$

$\frac{20}{3} < n < \frac{40}{3}$

$6\frac{2}{3} < n < 13\frac{1}{3}$

8, 10, 12

even

12) $p = 250 \quad l = 40$

$2w + 2l = 250$

$2w + 80 = 250$

$w = 85$

$A = 40(85) = \underline{340}$

13) $a = \$1$ bulbs

$b = \$2$ bulbs

cost × # bulbs

$a + 2b = 600$

$a = 2b$

$2b + 2b = 600$

$b = 150$

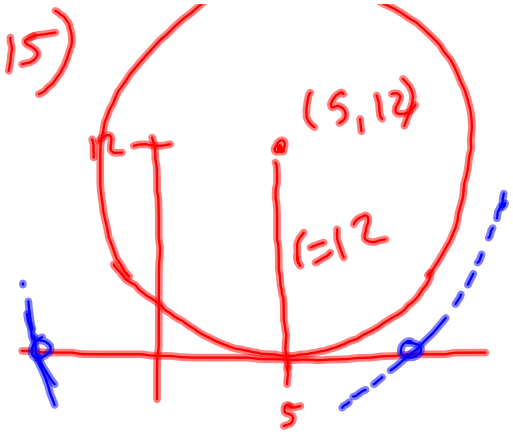
$a = 300$

$\underline{450}$

14) $\dfrac{4(x+y)\cancel{(x-y)}}{\cancel{(x-y)}} = \dfrac{40}{20}$

$4(x+y) = 2 \quad \Rightarrow \quad x+y = \frac{1}{2}$

15)



16) Pop = 2500

Vtrd = .4(2500)

Req = 2200

$T = \frac{.4(2500)}{2200}$

$= .4545$

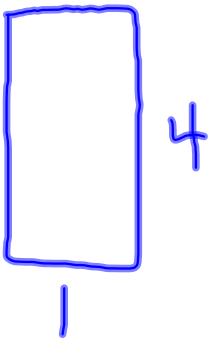
17) on an "edge" not a "side"

only 3 are on edges

~~left~~
right
straight down

(8)

18) $BC = AD = 1$ AREA $= CD = 4$



$C\left(\frac{1}{2}, c\right) = \left(\frac{1}{2}, 2\right)$

$y = px^3$

$2 = p\left(\frac{1}{2}\right)^3$

$2 = p\left(\frac{1}{8}\right)$

$p = 16$

Test 4 section 8 (611)

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

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1) $3n-12=18$

$3n=30$

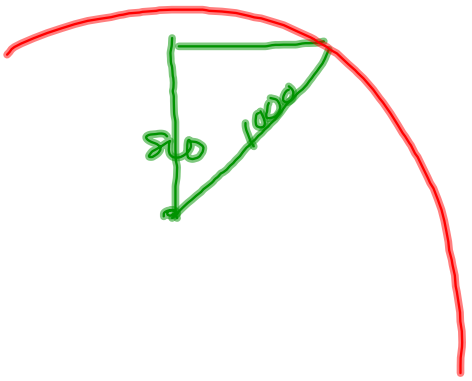
$n=10$

(D)

2) (D)

3) $3a+\sqrt{b}=(a+b)^2$ (B)

4)



I X

II ✓

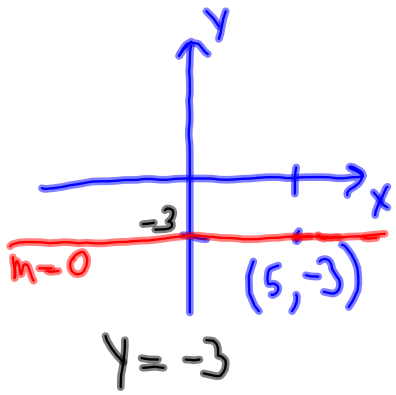
III ✓

(E)

5) $ax = 8x$ (A)

6) $u = 50$
$t = 130$
$s = 50$
230 (A)

7) l has slope = 0 so all y co-ords are $= -3$ (C)



8) $P(300) = 1900 = 17(300) - (3000 + b)$

$1900 - 5100 = -3000 - b$

$1900 - 2100 = -b$

$b = 200$

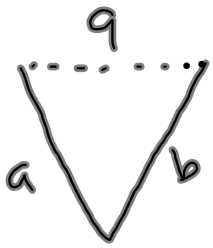
E

9) 11, 2, 5, 6 E

10) 4 6
8 12
12 B

11) $\dfrac{(a+b)}{\frac{a+b}{2}} = \cancel{a+b} \cdot \dfrac{2}{\cancel{a+b}}$ (D)

12)



$P=30$ so $a+b=21$

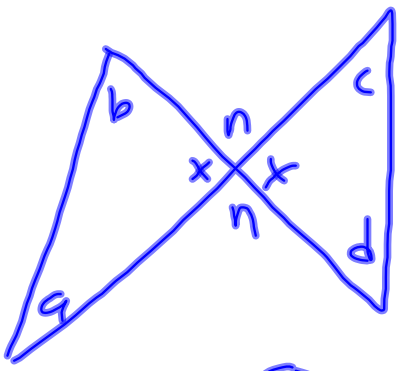
So $21 \cdot 4 = 84$ (D)

13) $g(2) = 5$ $g(5) = 2.5$ (B)

14) $-1 \cdot 8 = -8$

$3 \cdot 8 = 24$ (E)

15)



(B)

$2x = 360 - 2n$

$180 - (a+b) = x$

$180 - (a+b) = 180 - n$

$a+b = n$

$2n$

16) $x_{n+1} = 3 + \frac{1}{3}x_n$

$t_2 = 3 + \frac{t}{3}$

$\frac{3+\frac{t}{3}}{t}$

$\left(3+\frac{t}{3}\right)\frac{1}{t}$

$\frac{3}{3}\left(\frac{3}{t}\right) + \frac{t}{3t}$

$\frac{9}{3t} + \frac{t}{3t} = \frac{9+t}{3t}$

(C)