Test 5 Section 3 (652)

1) A
2) E
3) B
4) C
5) D
6) A
7) C
8) A
9) 2/5, 0.4
10) 128
11) 2400
12) 3
13) 8/3, 2.66, 2.67
14) 22.5<x<27.5, 45/2<x<55/2
15) 24
16) 10
17) 8
18) 70

Jul 31-3:06 PM

2) $2\left(\frac{x}{y}\right)y^2 = 2xy$

5) $\underset{1}{8} + (26-1)\underset{25}{9} = \underline{\underline{26\text{th}}}$ (D)

7) $(n)+(n+1)=t \Rightarrow 2n+1=t$

$(n+1)=t-n$

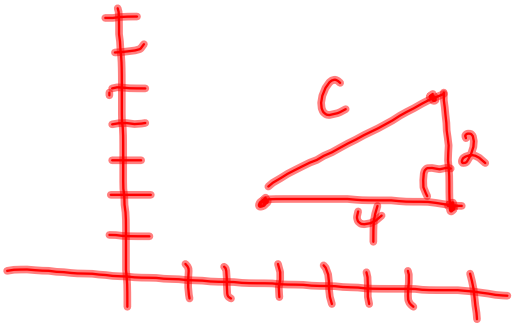
$2n=t-1$

$n=\frac{t-1}{2}$

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

$\frac{t+1}{2}$ (C)

4)



$2^2+4^2=c^2$

$20=c^2$

$\sqrt{20}=\sqrt{c^2}$

$\sqrt{20}=c$

$p=4+2+\sqrt{20}$

(C)

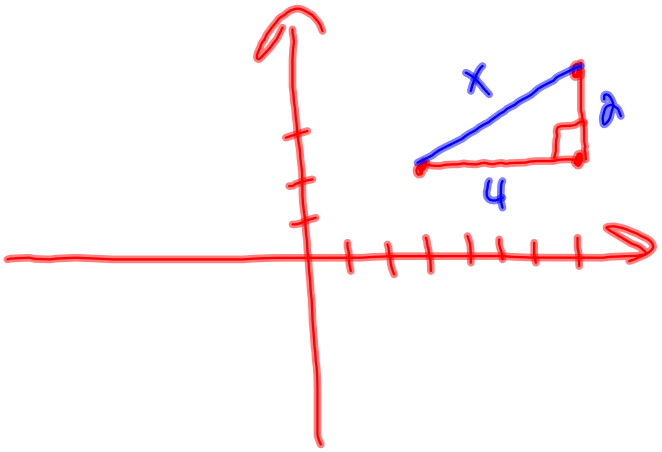
3) $x+y=30$

$x>8$

$y>0$? NO $x=38$

$y<22$? ✓ $y=23$ $23+8=31$

4)



$x^2=2^2+4^2$

$x=\sqrt{20}$

$P=6+\sqrt{20}$

C

6) try ... A is not ~~sufficient~~

9) $2(x-3)=8$

$x-3=4$

$+6 \quad +6$

$x+3=10$

$x=7$

$\frac{x-3}{x+3} = \frac{4}{10} = \frac{2}{5}$

$\frac{7-3}{7+3} = \frac{4}{10} = \frac{2}{5}$

8) slb = 3(0) + 6(1) + 2(2) + 1(3)
= 6 + 4 + 3 = 13
stud = 12

13, 13+n
n=0

(A)

10) $2x - 3 = 253$

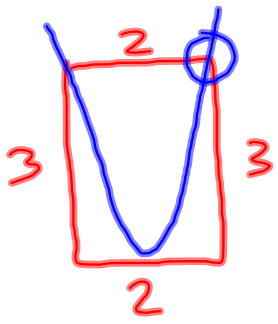
$2x = 256$

$x = 128$

11) total HT = 4,500

Black HT = 900

Black = 900 + 1,500 = 2400

12) 

$r = 10$

$R(1,3)$

$y = ax^2$

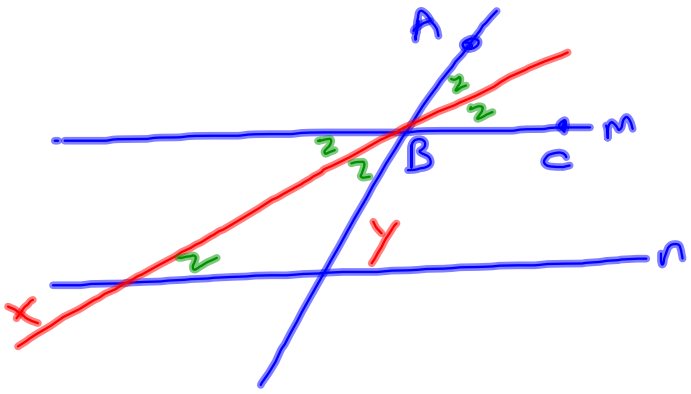
$3 = a$

13) $2b + b = 2 + 6$

$3b = 8$

$b = \frac{8}{3}$

14)



$x = z$

$2z = y$

$2x = y$

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

$y = 50 \Rightarrow x = 25$

15) 4p 4t

(1p 2t)

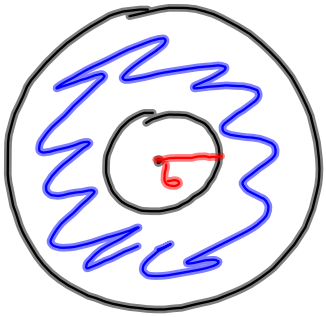
4 diff p's x $\frac{(4 \cdot 3) \text{ times}}{2}$ = 24

under

combinations
permutations

xxxx

16)



$A = 64\pi$

$A_{white} = \pi(36)$

$A_{whole} = \pi r^2 = 36\pi + 64\pi$

$= 100\pi$

$r^2 = 100$

$r = 10in$

17) $n = p \times r \times s$

it says "positive" factors not "prime" factors

pr is a factor of n
ps "
rs

factors
$n = 3 \cdot 5 \cdot 7$
$n = 15 \cdot 7$
$n = 21 \cdot 5$
$n = 3 \cdot 35$

3 prime factors, 1, n, pr, ps, rs

(8) total

18) $h(t) = c - (d - 4t)^2$

$106 = c - (d - 4(2.5))^2$

$106 = c - (d - 10)^2$

$6 = c - (d - 0)^2$

$6 = c - d^2$

$106 = c - (d^2 - 20d + 100)$

$106 = c - d^2 + 20d - 100$

$106 = 6 - 100 + 20d$

$\frac{200}{20} = d$ (10)

$d=10 \quad 6=c-d^2$

$6=c-100$

$106=c$

$h(t)=c-(d-4t)^2$

$h(1)=c-(d-4)^2$

$h(1)=106-(10-4)^2$

$=106-36$

$=70$

Test 5 Section 7 (669)

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

Aug 1-1:06 PM

1) C 2) D 3) $10 + $2 * chairs D

4)

6) $\frac{6+6+12+16+X}{5} = X$

D $40 = 4X$

$X = 10$

$40 + X = 5X$

7) $2y = 50 \quad y = 25 \quad \therefore z = 65$ (C)

8) $13 \Rightarrow 26 \quad 26 \Rightarrow 26$ ~~$52 \Rightarrow 52$~~

(C)

9) "m" mins + "s" seconds

mx60 secs + s secs $\therefore$ (A)

60m + s

10) $4x - 2x^2 - 4 + 2x = 0$

$2x^2 - 6x + 4 = 0$

$(2x - 2)(x - 2) = 0$

$2x - 2 = 0$ OR $x - 2 = 0$ (D)

$2x = 2$ $\quad x = 2$

$x = 1$

11) $x^3 = y^9 \Rightarrow (x^3)^{1/3} = (y^9)^{1/3}$

$x = y^3$

11) $x^3 = y^9$ $\quad \sqrt[3]{x^3} = \sqrt[3]{y^9}$

(C) $\quad x = (y^9)^{1/3}$

$x = y^{9/3} = y^3$

12) DC (E)

13) A (34 can't be a birthday)

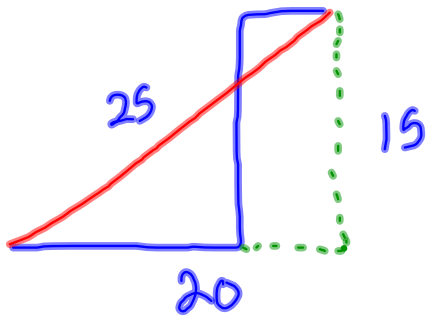
14) $x+9 = (x-3)^2 = x^2-6x+9$

$x = x^2-6x$ (C)

15) $1 \to 100 = 100\ \#$

$1 \to 10 \quad -10$ $\quad 90$ (E)

16)



3 4 5
15 20 25

$15^2+20^2=c^2$

$625=c^2$

$25=c$

$35-25=10$

(C)

17) $A=\frac{\pi(1)^2}{\pi(\frac{1}{2})^2}=\frac{\pi}{\frac{1}{4}\pi}=4$

(D)

18) $-22+\ldots+22=0$

$23+24+25=72$

(B)

19) $x^{-\frac{4}{3}} = k^{-2}$

$\left[\left(x^{-\frac{2}{3}}\right)^2 = k^{-2}\right]^{\frac{1}{2}}$

$x^{-\frac{2}{3}} = k^{-1}$

$y^{\frac{4}{3}} = n^2$

$\left[\left(y^{-\frac{2}{3}}\right)^{-2} = n^2\right]^{-\frac{1}{2}}$

$y^{-\frac{2}{3}} = n^{-1}$

$(xy)^{-\frac{2}{3}} = k^{-1}n^{-1} = \frac{1}{kn}$ (A)

OR $\left(x^{-\frac{4}{3}} = k^{-2}\right)^{-\frac{3}{4}}$

$x = k^{\frac{6}{4}} = k^{\frac{3}{2}}$

$\left(xy = (nk)^{\frac{3}{2}}\right)^{-\frac{2}{3}}$

$(xy)^{-\frac{2}{3}} = (nk)^{-1}$

$(xy)^{-\frac{2}{3}} = \frac{1}{nk}$

$\left(y^{\frac{4}{3}} = n^2\right)^{+\frac{3}{4}}$

$y = n^{\frac{6}{4}} = n^{\frac{3}{2}}$

20) $f(x) \Rightarrow f(x-h)+k$

$x \to x+h$ $y \to y+k$

add h to every x. "slide" graph h units to the right.

add k to every y. "slide" graph y units up.

$f(x) = x^3 - 4x$

$g(x) = f(x+h)+k$

$g(2) = f(2+h)+k = 1$

$(2+h)^3 - 4(2+h) + k$

$\vdots$

no help

$g(x) = f(x+h)+k$

slide to rt = 3 $h = -3$

slide up = -2 $k = -2$

$hx = 6$

E

$y \to y-2$ $\quad k=-2$

$x \to x+3$ $\quad h=-3$

(E)

$hk=6$

Test 5 Section 9 (679)

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

Aug 1-1:13 PM

1) $\frac{6}{10} = \frac{3}{5}$ (B)

2) (A) 3) (B) 4) (E)

5) $1.2 \times 5 = 6$ (D)

$1 \times 5 = 5$

6) (D)

7) integers ~~(B)~~ (4)

$16 - 9 = 7$

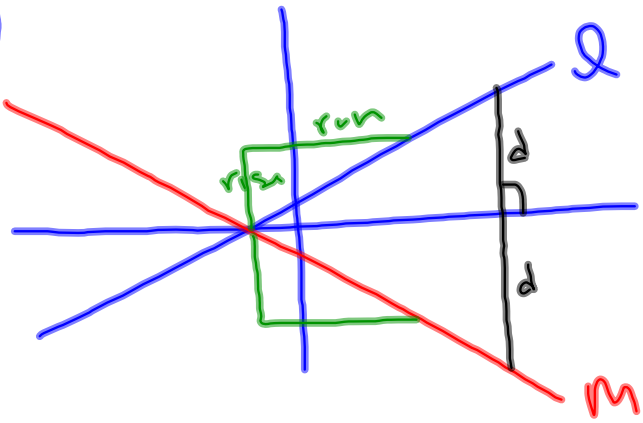
8) $|u-w|$ is distance between $u, w = x$ (C)

9) $\frac{(n+5)5-5}{5} = \frac{5n+25-5}{5} = \frac{5n+20}{5}$

$n+4$ (D)

10) $4 \times \frac{1}{2} = 2ft$ for each poster | $300 - 2n$ (B)

11)



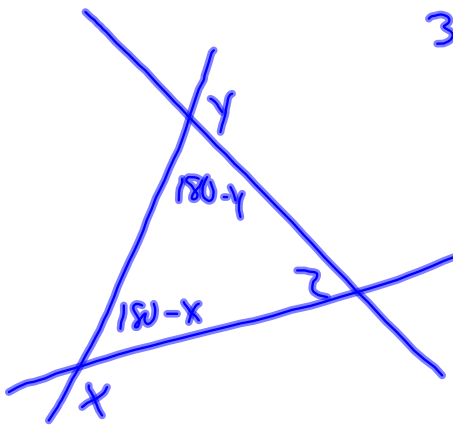
$\frac{\text{opposite rise}}{\text{same run}}$

= neg slope

(B)

12) A

13)



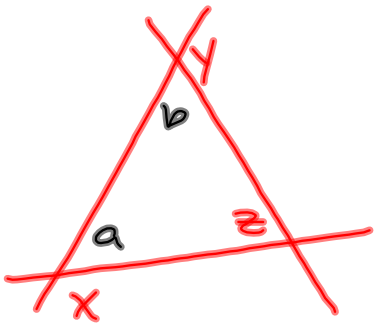
$30 = 180 - (180 - x + 180 - y)$

$30 = x - 180 + y$

$210 = x + y$

(D)

13 alt (better)



$a+b+z=180$ $z=30$

$a+b=150$

$a+x+b+y=360$

$a+b+x+y=360$

$150+x+y=360$

$x+y=210$

14) Vertex x-coord $= -\frac{b}{2a}$ $(-)$

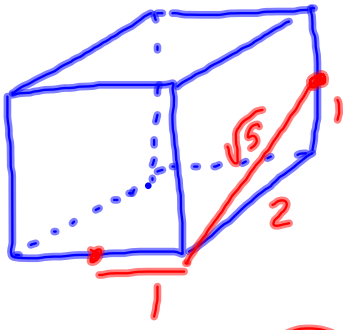
Concave up

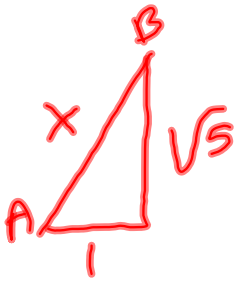
$f(0)=0+0+c$

y-int $= c$ $(+)$

E

15)





$X^2 = 1+5$

$X = \sqrt{6}$

(D)

16)

$a = a-2$

$a^2 - a = (a-2)^2 - (a-2)$

$a^2 - a = a^2 - 4a + 4 - a + 2$

$6 = 4a$

$a = \frac{3}{2}$

(C)

$f(x) = x^2 - x$

$f(a) = f(a-2)$

$a^2 - a = (a-2)^2 - (a-2)$