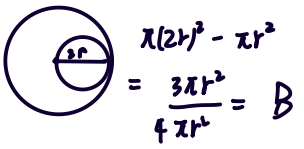
	1-20	21-25
2015 X 10	✓	
16 X 11	✓	
17 X 8	✓	
18 X 8	✓	
19 X 8	✓	
20 X 7	✓	
21 X 8	✓	
22 X 9	✓	

15

(4)

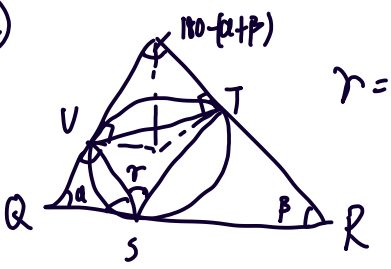
(12)



$\pi(2r)^2 - \pi r^2$

$= \frac{3\pi r^2}{4\pi r^2} = B$

graphs are not in scale



$r = \alpha + \beta$?

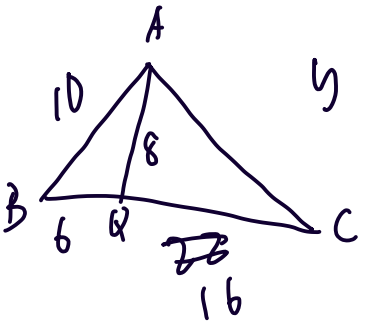
$\frac{1}{2}(180-\alpha) + r + \frac{1}{2}(180-\beta) = 180$

$90 - \frac{1}{2}\alpha + r + 90 - \frac{1}{2}\beta = 180$

$-\frac{1}{2}\alpha - \frac{1}{2}\beta = -r$

$\frac{1}{2}(\alpha+\beta) = r$

(14)



$A = 88$

$\frac{1}{2} \times (22) = 88$

$x = 8$

$8^2 + BQ^2 = 10^2$

$= \sqrt{100-64}$

$(8\times1)^2 \quad (8\times2)^2$

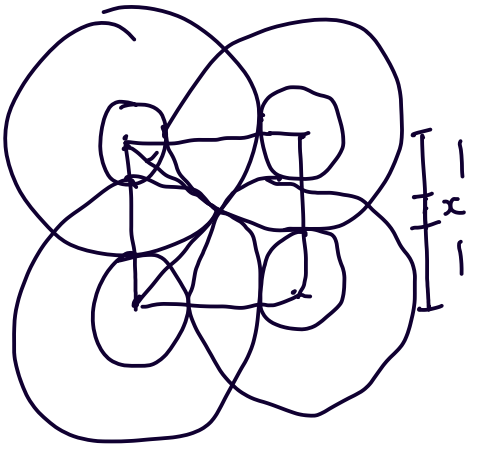
$8^2 + 16^2 = y^2$

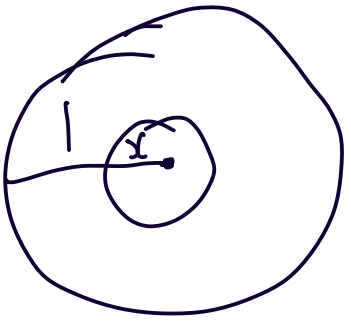
$8^2(1^2+2^2) = y^2$

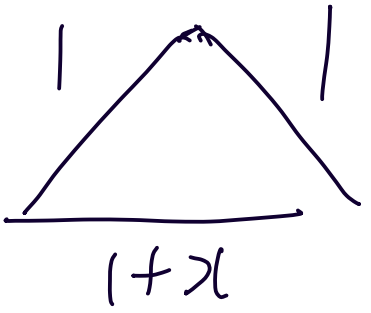
$y = 8\sqrt{5}$

$BQ = \sqrt{36}$

(17)







~~$(1-x) + x + x$~~

$\square = (1+x)^2$

$4\triangle = 4\left[\frac{1}{2}(1)(1)\sin(90^\circ)\right.$

$= 2$

$2 = (1+x)^2$

DV Pythagoras.

$$2 = 1 + 2x + x^2$$

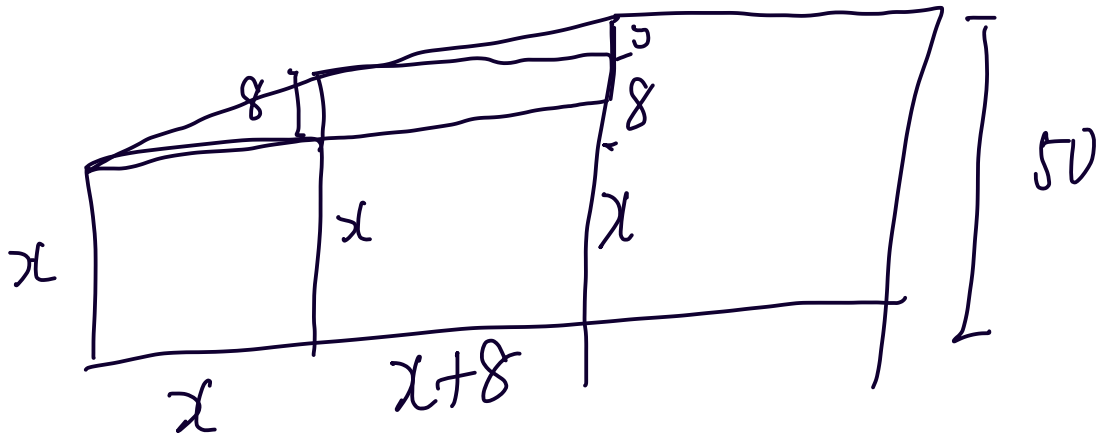
$$0 = x^2 + 2x - 1$$

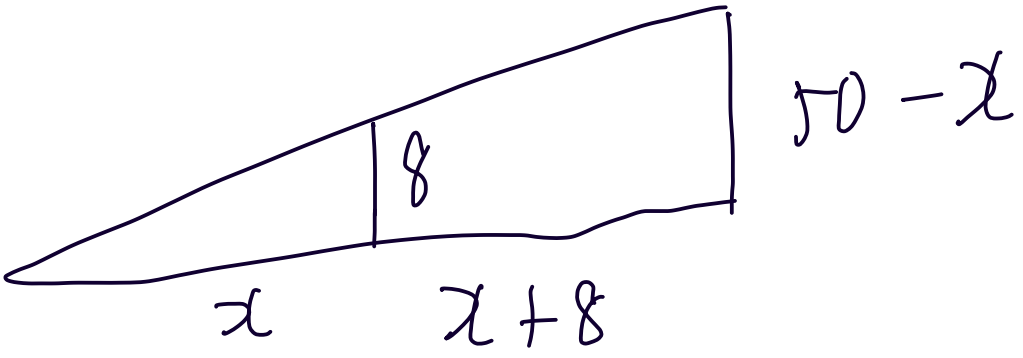
$$= \frac{-2 \pm \sqrt{4 - 4(1)(-1)}}{2}$$

$$= \frac{-2 + \sqrt{8}}{2}$$

$$= -1 + \sqrt{2}$$

(19)





$$\frac{8}{x} = \frac{50-x}{2x+8}$$

$$16x + 64 = 50x - x^2$$

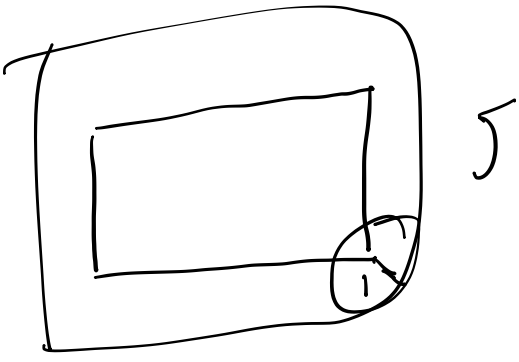
$$x^2 - 34x + 64 = 0$$

1 -32

1 -2

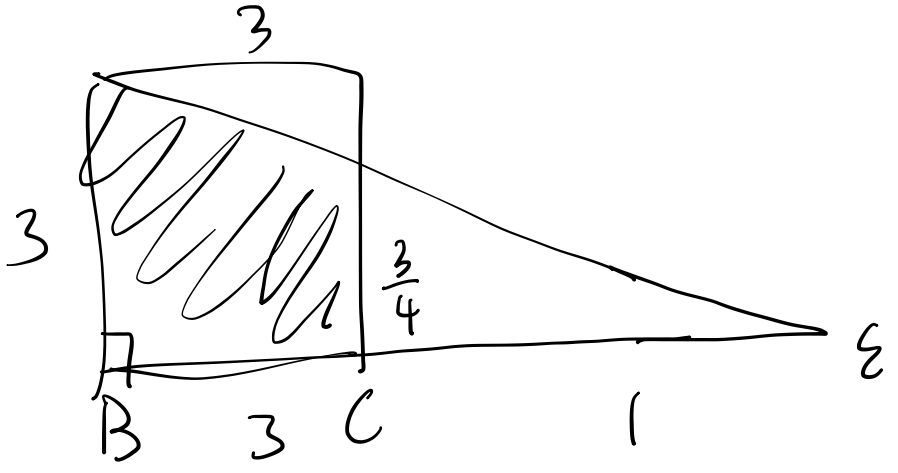
16

(3)



$3(4) = 12 \Rightarrow B$

(6)



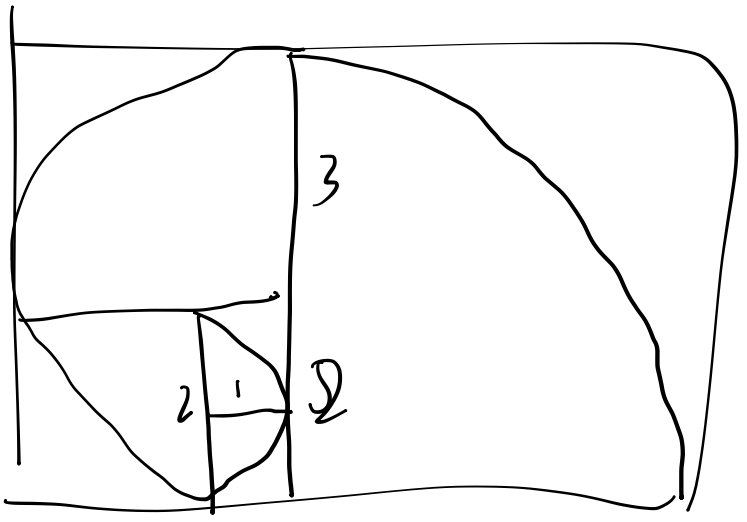
$\frac{1}{2}\ 3\ \left(\frac{3}{4}+3\right) = \frac{1}{2}\left(\frac{9}{4}+9\right)$

$= \frac{9}{8} + \frac{9}{2}$

$$= \frac{45}{8}$$

$$= 5\frac{5}{8}$$

(13)



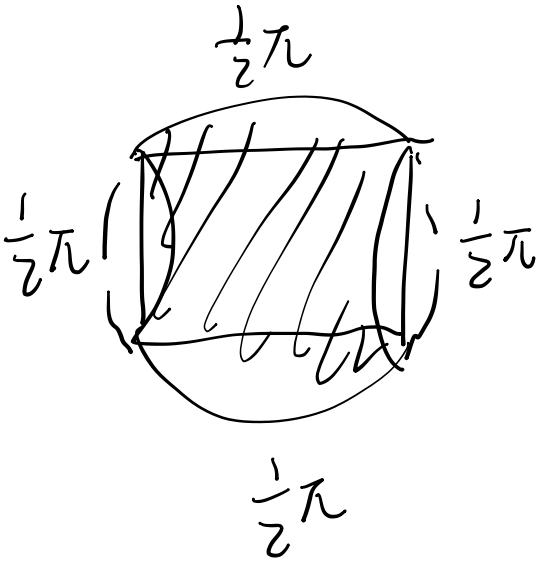
$$\frac{1}{2}(2\pi(1)) + \frac{1}{4}(2\pi(2)) +$$

$$\frac{1}{4}(2\pi(3)) + \frac{1}{4}(2\pi(5))$$

$$= \pi + \pi + \frac{3}{2}\pi + \frac{5}{2}\pi$$

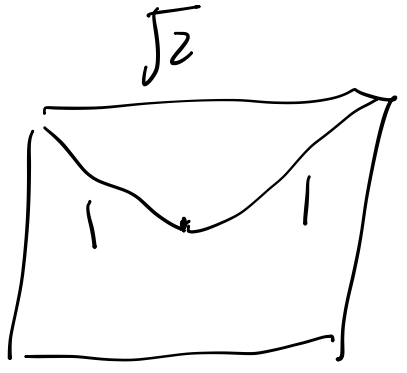
こ　6π

(18)



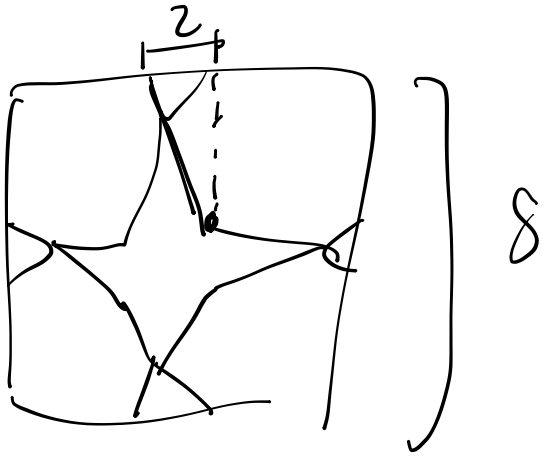
$\frac{(2\pi(1))}{4}$

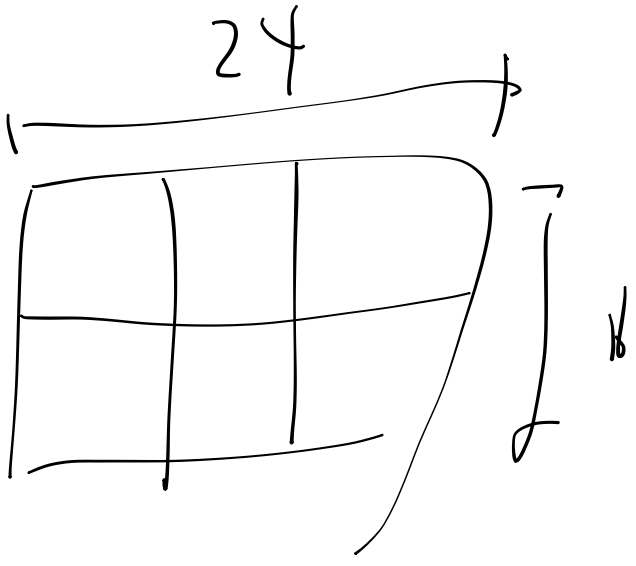
(20)

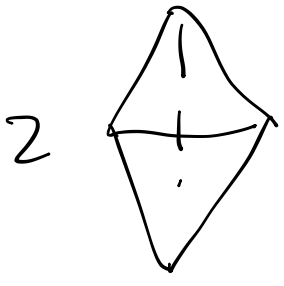


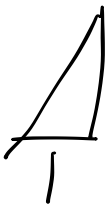
$\sqrt{2^2+1^2}$

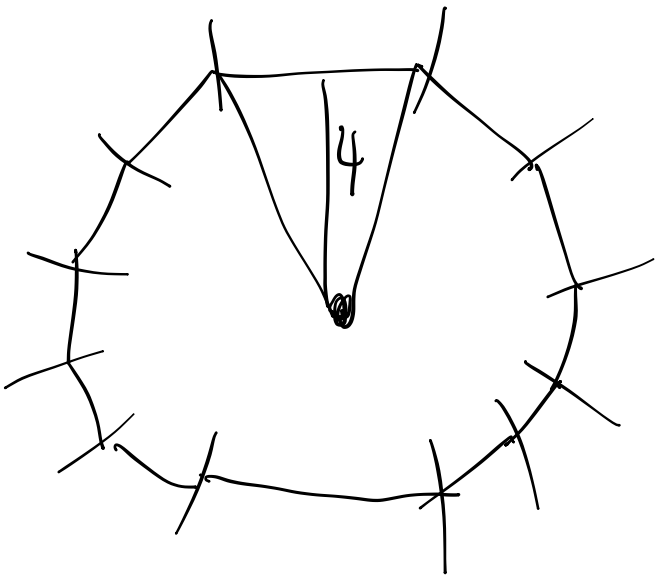
$= \sqrt{5}$



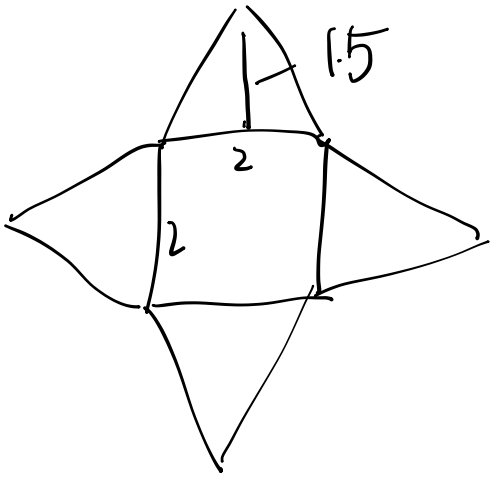








8 4



2(1.5)(4) = 4

6 + 4

17 $n(n+1)$ $k(k+1)$

$1(1+1)$ 2

6

12

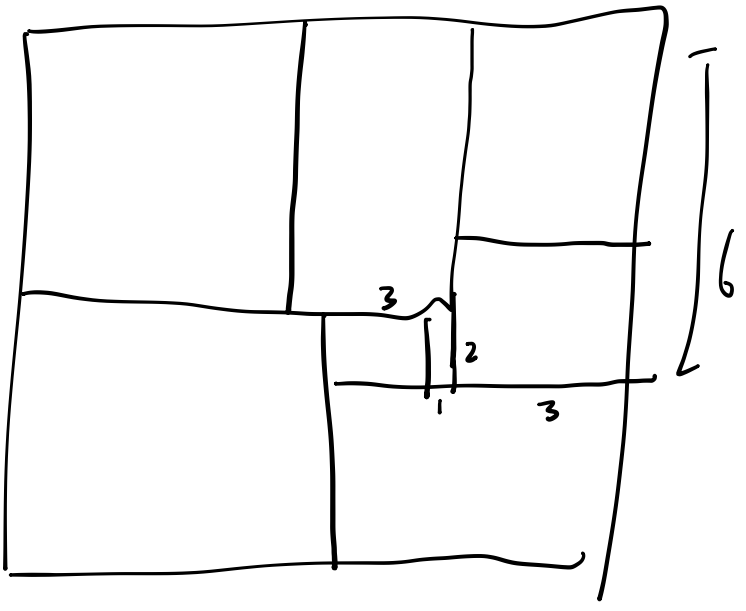
20

30

56

72

(9)

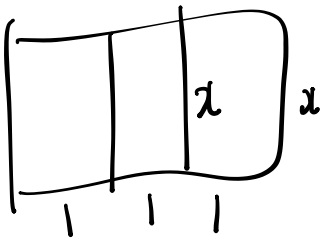


$(1\times2)+(2\times3)+(3\times4)+\dots$

$+(8\times9)=15\times16$

$\therefore n=15$

(10)

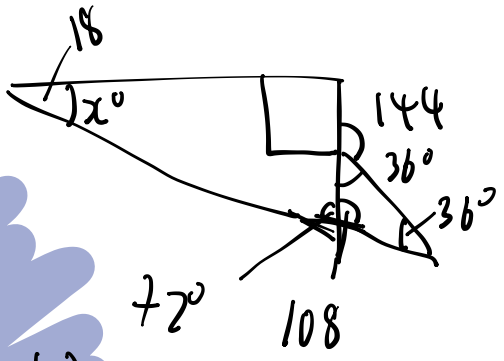


$\frac{x}{1}=\frac{3}{x}$ $\frac{3}{\sqrt{3}}=\frac{\sqrt{3}}{1}$

$x^2=3$

$x=\pm\sqrt{3}$ $\Rightarrow D$

(12)

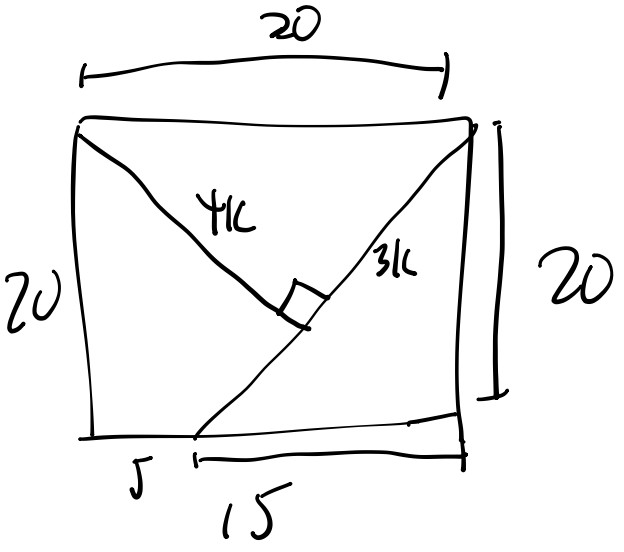


10) 360 → 36.

- 先找會的再串連.

(15)

(16)



$$\frac{20}{15} = \frac{4}{3}$$

$$(4k)^2 + (3k)^2 = 20^2$$

$$16k^2 + 9k^2 = 400$$

$$k^2 = 16$$

$$k = \cancel{\pm} 4$$

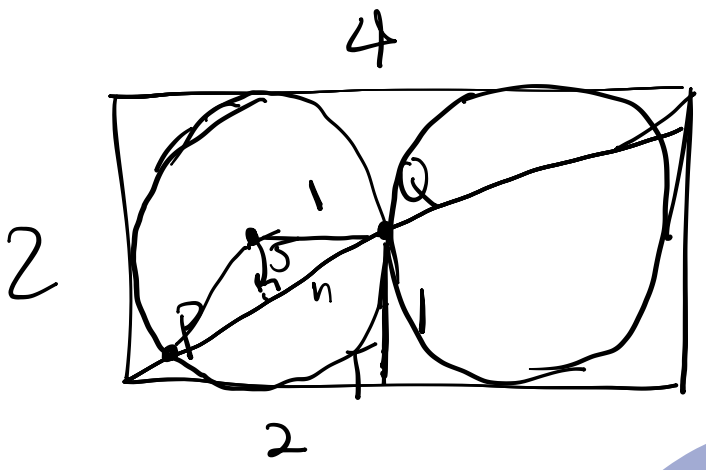
$$\Rightarrow 20^2 - \frac{1}{2}(20)(15) - \frac{1}{2}(16)(12)$$

$$= 400 - 150 - 96$$

$$= 250 - 96 = 154$$

$$\Rightarrow D$$

(19)

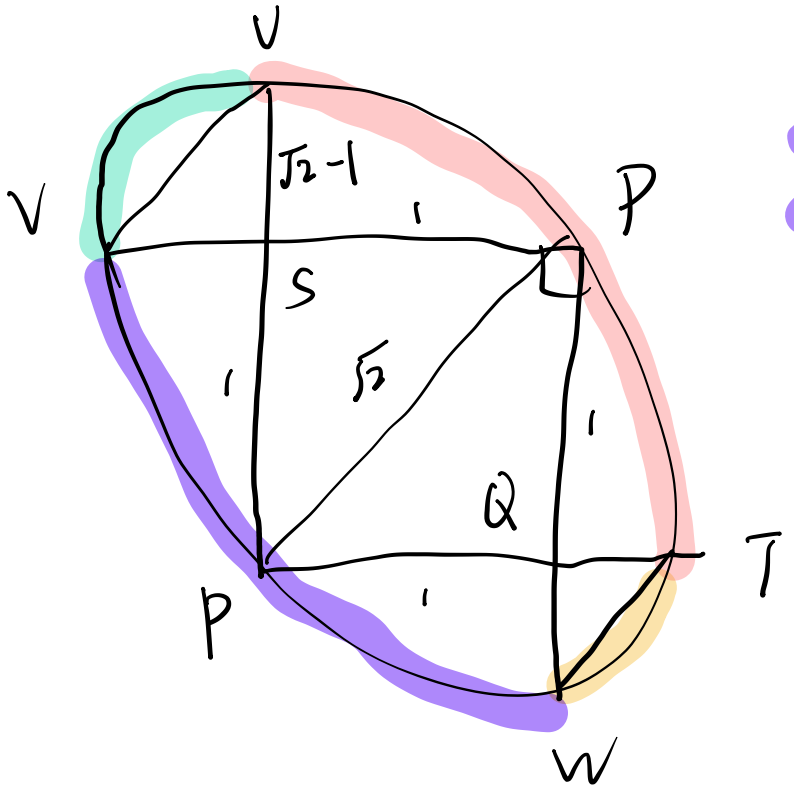


- 切割法
- 填補法
- Similar △

$$\frac{1}{\sqrt{5}} = \frac{n}{2}$$

$$\frac{\cancel{4}}{\sqrt{5}} =$$

(20)



看之前題目

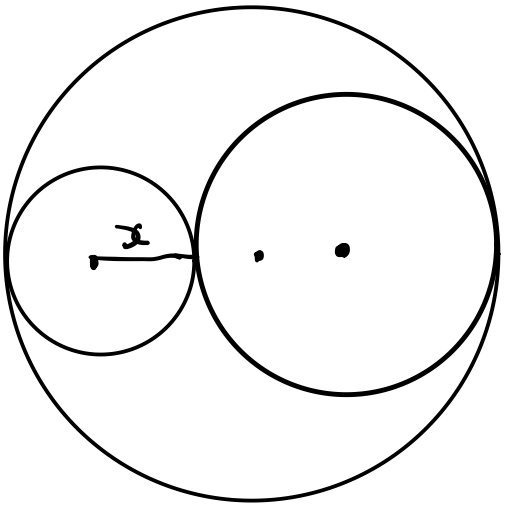
$$2\left(\frac{1}{4}2\pi(\sqrt{2})\right) + 2\left(\frac{1}{4}2\pi(\sqrt{2}-1)\right)$$

$= \sqrt{2}\pi + \pi\sqrt{2} - \pi$

$= 2\sqrt{2}\pi - \pi$ ⇒ B

18

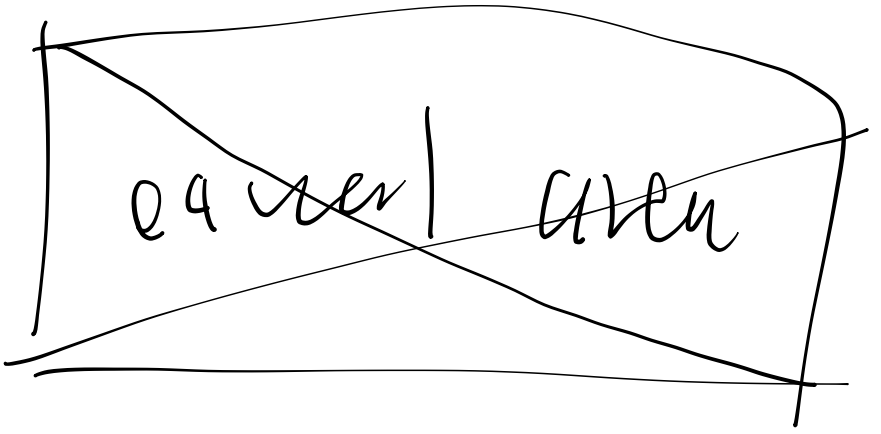
(7)



$$\frac{2\pi r + 2\pi(2r)}{2\pi(3r)}$$

$= \frac{6\pi r}{6\pi r}$ ⇒ A

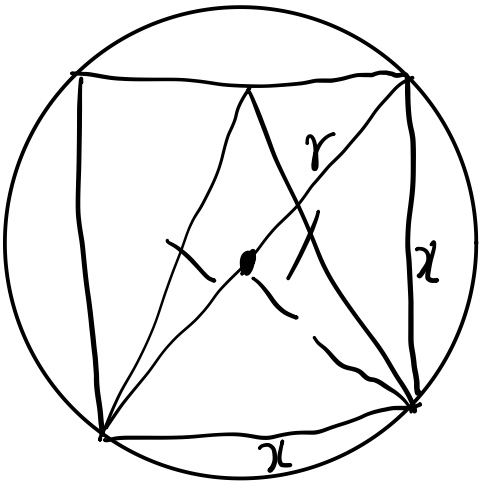
(9)



$$\frac{4}{10} = \frac{2}{5}$$

(12) A

(10)



$$2x^2 = r^2$$

$$x = \sqrt{\frac{r^2}{2}}$$

$$\frac{\frac{1}{2}\left(\frac{r\sqrt{2}}{2}\right)^2}{\pi r^2 - \left(\frac{r\sqrt{2}}{2}\right)^2} = \frac{r\sqrt{2}}{2}$$

$$= \frac{1}{2}\left(\frac{2r}{4}\right)^2$$

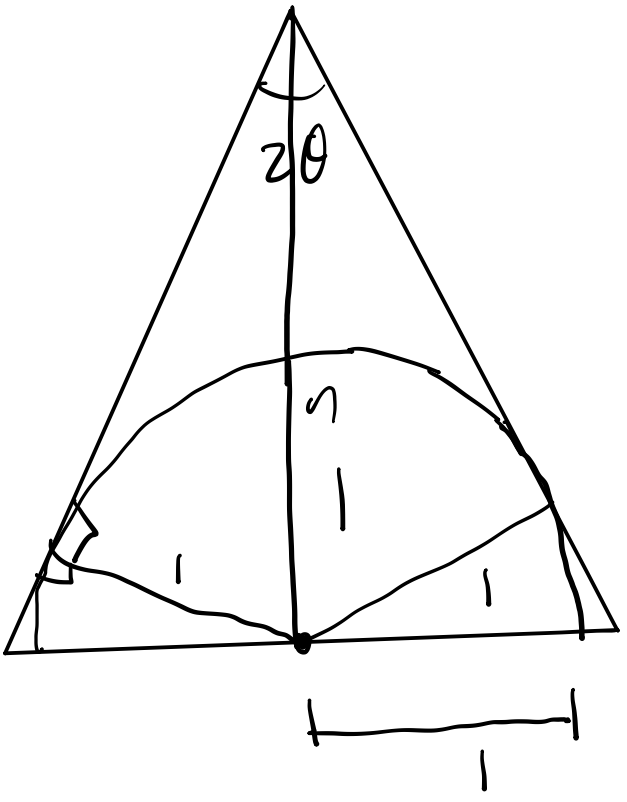
$$\pi r^2 - \frac{r^2(2)}{4}$$

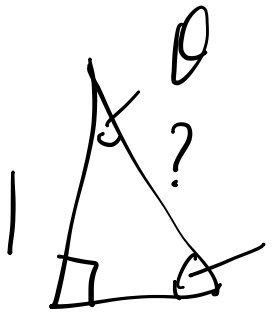
$$= \frac{\frac{1}{4}r^2}{2\pi r^2 - \frac{1}{2}r^2}$$

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

$$\frac{1}{2(2\pi - 1)} \Rightarrow D$$

(20)





~~Sin~~ $\frac{1}{?}$

$\cos\theta = \frac{?}{\text{~~w~~}}$

$\frac{\sin\theta}{1} = \frac{\sin 90}{n}$

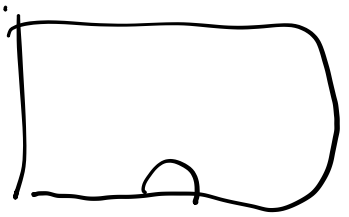
$? = \frac{1}{\cos\theta}$

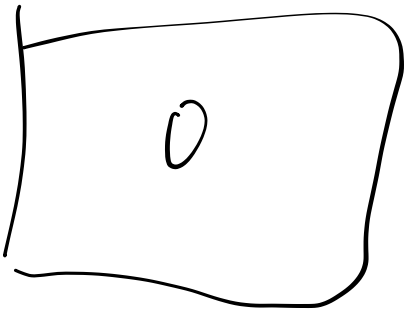
$$n = \frac{1}{\sin\theta}$$

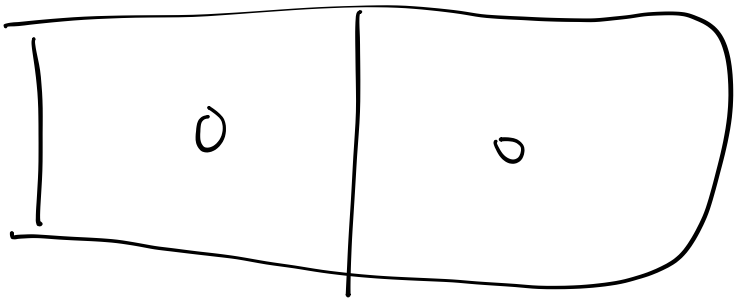
$$Area = \frac{1}{2}\left(\frac{1}{\sin\theta}\right)\left(\frac{1}{\cos\theta}\right) \Rightarrow E$$

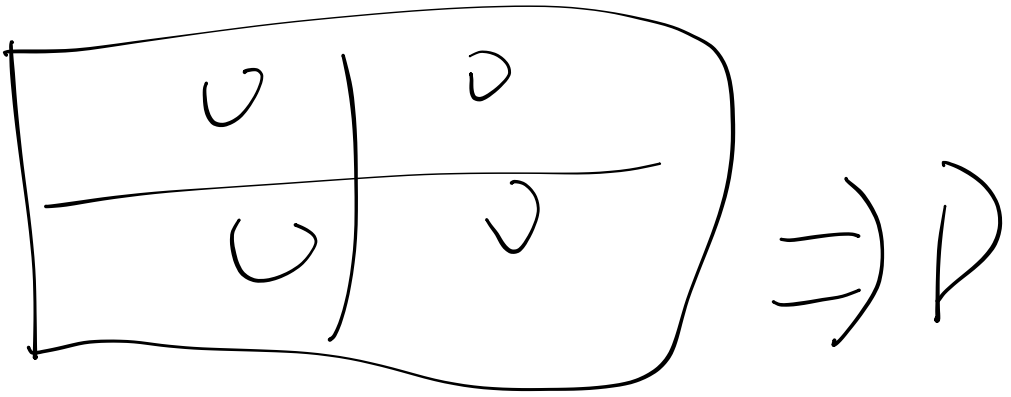
19

(9)



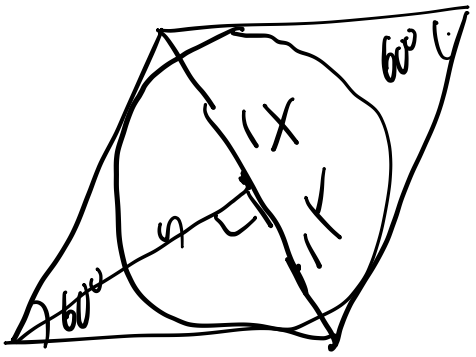






$\Rightarrow P$

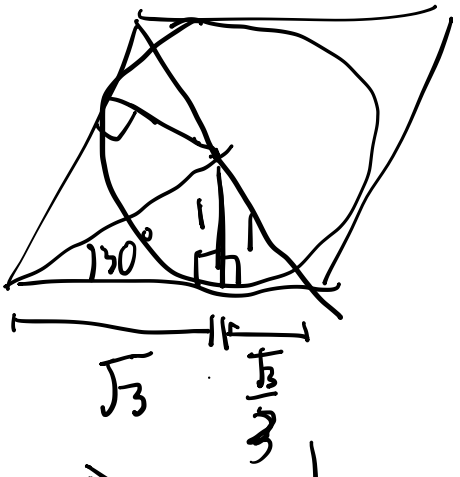
(12)



一点与
3 tangent
一定是

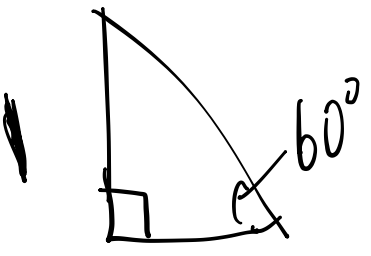
$$\tan 30^\circ = \frac{1}{r}$$

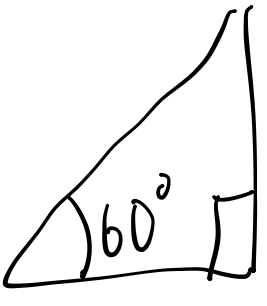
$$r = \sqrt{3}$$



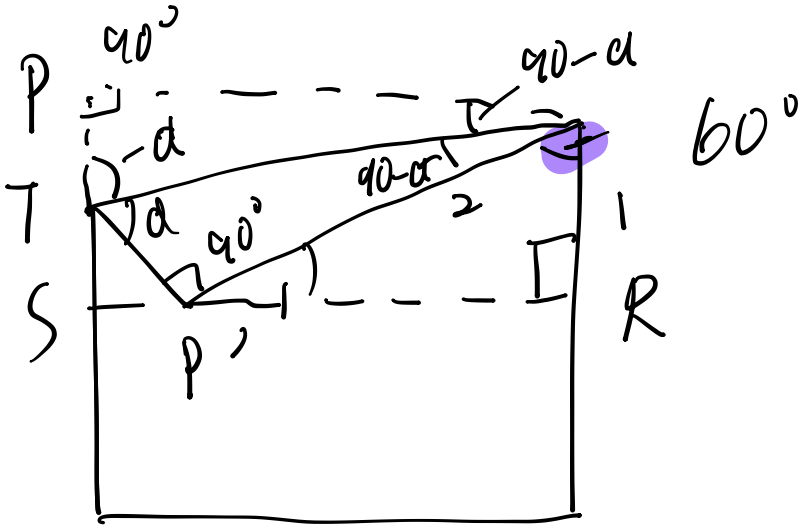
$$\Rightarrow \frac{1}{2}\left(\sqrt{3}\right)(2)(2)$$

$$2\sqrt{3} \Rightarrow C$$





18



$$\cos 60^\circ = \frac{1}{2}$$

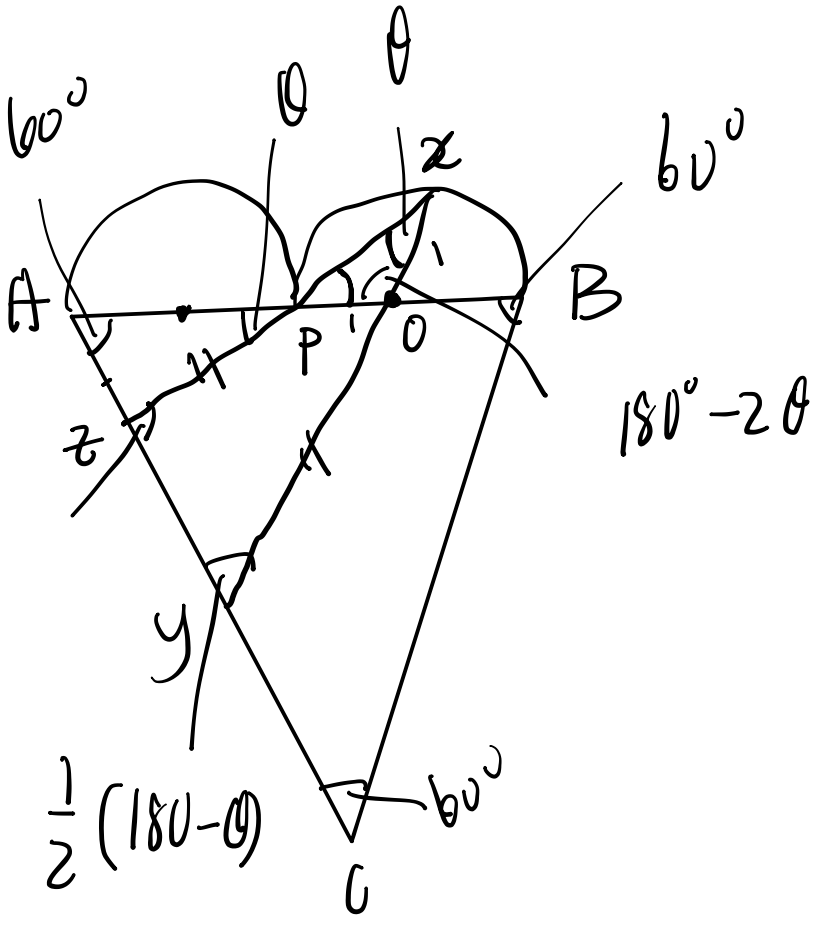
19

$$y = \pm\sqrt{\sin(x^2)}$$

4^{th} –

$\Rightarrow$ no value.

(20)



$90 - [90 - \frac{1}{2}\theta)$

$\theta \quad 90 + \frac{1}{2}\theta + 60° + \theta$

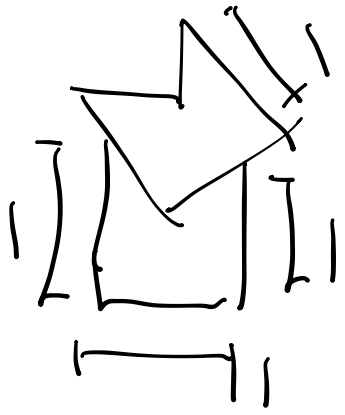
$= 180$

$\frac{1}{2}\theta = 20°$

$\theta = 20°$

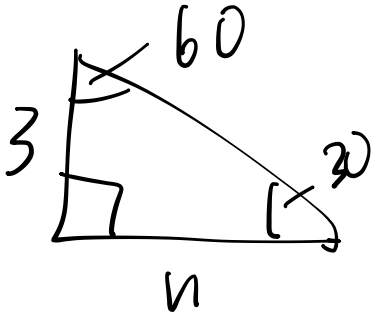
20

(11)



$11 \Rightarrow 5$

(15)



360
120
240

~~sin~~ $\tan 30 = \frac{3}{n}$

$\frac{1}{2}$
$\frac{\sqrt{3}}{2}$
$\frac{2}{1}$
$\frac{\sqrt{3}}{3}$

$n = \frac{9}{\sqrt{3}}$ $\frac{9}{\sqrt{3}}$

$\frac{1}{2}\left(\frac{9\sqrt{3}}{3}\right)(3) \times 2 + \pi(3)^2\left(\frac{2}{3}\right)$

$= 9\sqrt{3} + 6\pi$

(16) $y^2 - 2y = x^2 + 2x$

A or C

$y^2 - x^2 = 2x + 2y$

$(y-x)(y+x) = 2(x+y)$

~~$y = 2 + x$~~

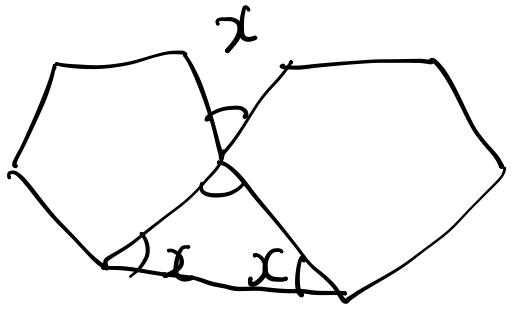
$(y-x)(y+x) - 2(y+x) = 0$

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

$y = -x$ $\Rightarrow$ C

$y = x + 2$

21



$180-2x+x+$

$$\frac{(5-2)\times 180}{5}$$

$$\begin{array}{r} 108 \\ 5\overline{)540} \\ \underline{5} \\ 40 \end{array}$$

$=$

$180-2x+x+108+108$

$=360$

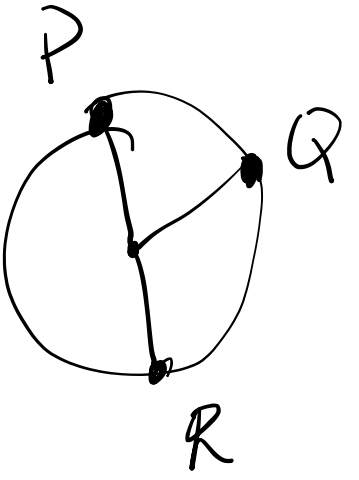
$-x = -30$

$$\begin{array}{r} 180 \\ -108 \\ \hline 72 \end{array}$$

-108

$36 \quad \frac{1}{2} r^2 \theta$

(6)



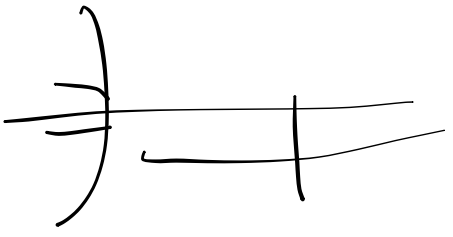
$r\theta = l$

$\theta : \theta : \theta$

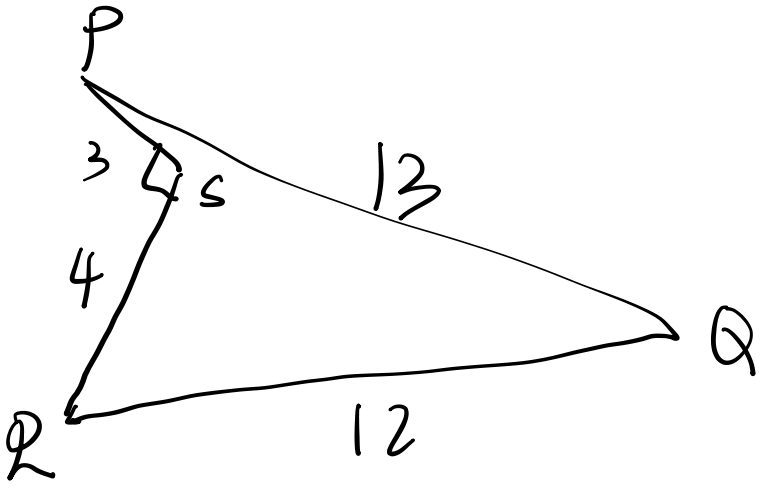
$60 : 120 : 180$

$1 : 2 : 3$

$6\overline{)360}$ $\quad 60$



(8)



30 - 6

⇒ B

11 (10)

40 : 72 : 108 : 140

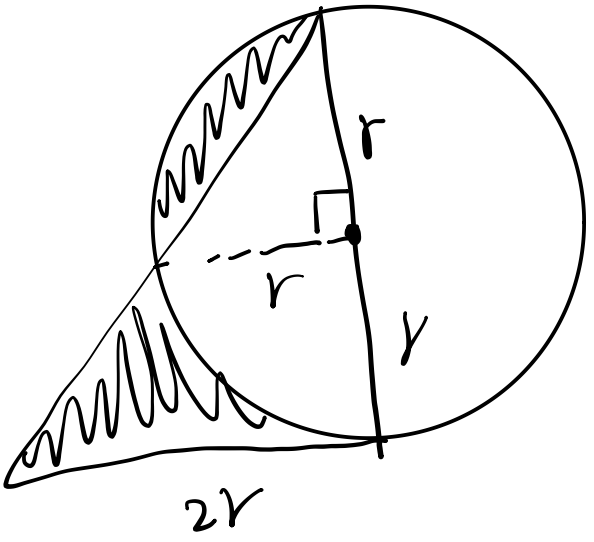
20 : 36 : 54 : 70

10 : 18 : 27 : 35

28
27
55
+35
90

⇒ D

(17)

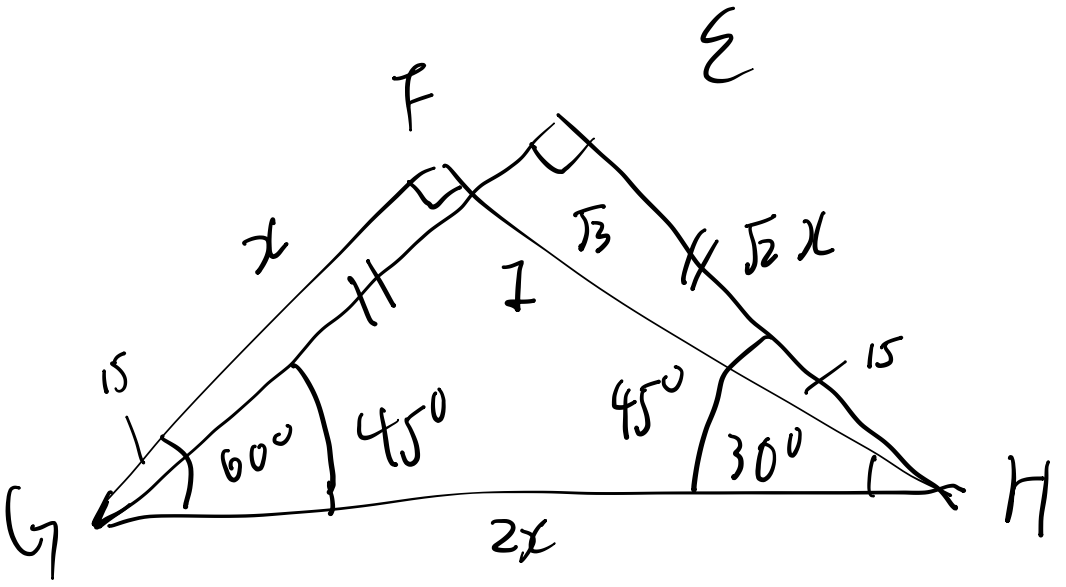


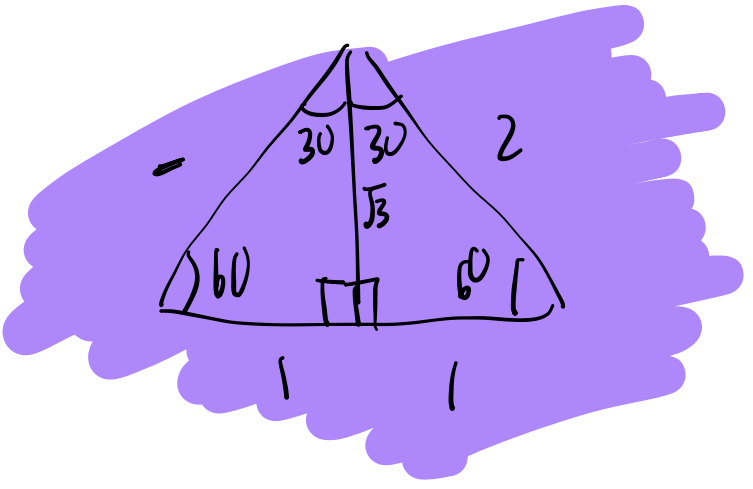
$$\frac{1}{4}\pi r^2 - \frac{1}{2}r^2 + \frac{1}{2}(2r)^2 - \frac{1}{2}r^2 - \frac{1}{4}\pi r^2$$

$$= -r^2 + 2r^2$$

$$= r^2 \Rightarrow B \checkmark$$

(19)





$2y^2 = 4x^2$

$y = \sqrt{2x^2}$

$= \sqrt{2}\,x$

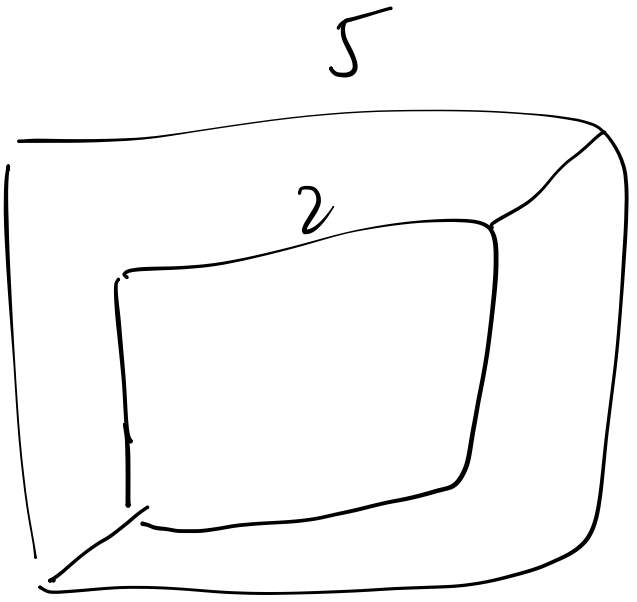
$\Rightarrow$ $1^2 : \sqrt{2}^2$

$= 1 : 2$

22

(3) $\Rightarrow 6$

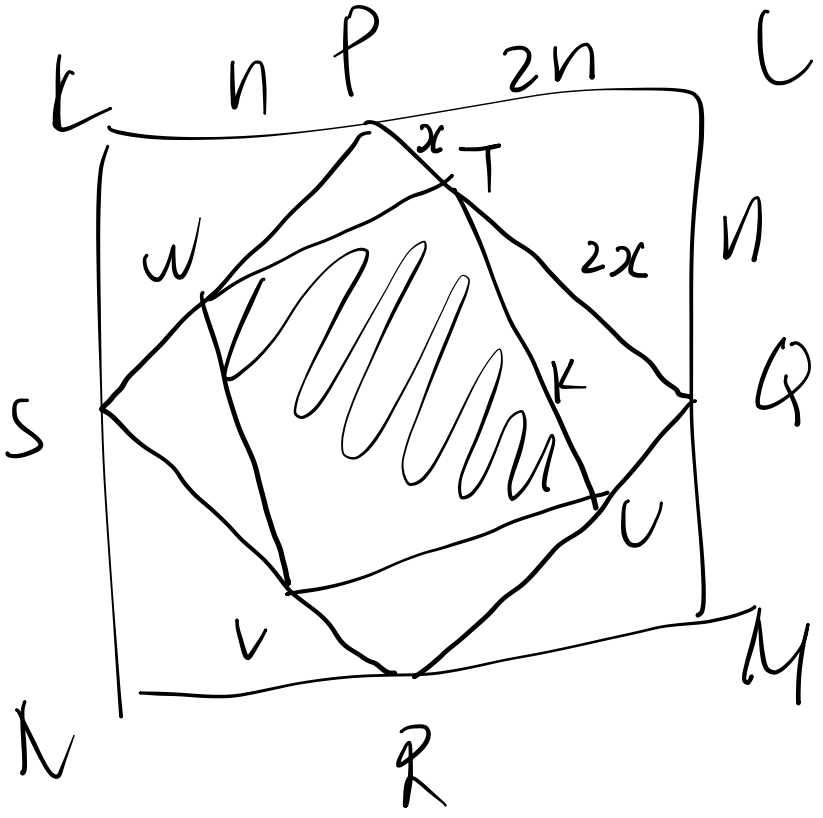
(4)

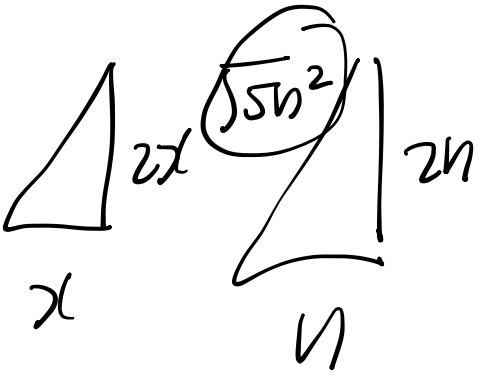


$$\frac{4}{\frac{1}{2}\left(\frac{1}{4}(25)-4\right)} = \frac{8}{\cancel{25}\ 21} \Rightarrow 15$$

(8) ⇒ C

(14)





$$\frac{}{(3n)^2}$$

$$K = \sqrt{\left(\frac{2\sqrt{5n^2}}{3}\right)^2 + \left(\frac{\sqrt{5n^2}}{3}\right)^2}$$

$$\sqrt{4n^2 + n^2}$$

$$K = \sqrt{\frac{20n^2}{9} + \frac{5n^2}{9}}$$

$$= \sqrt{\frac{25n^2}{9}}$$

$$= \frac{\left(\frac{5n}{3}\right)^2}{(3n)^2} = \frac{\frac{25n^2}{9}}{\frac{9n^2}{1}}$$

$$\Rightarrow A = \frac{25n^2}{81n^2}$$

(T6 XD

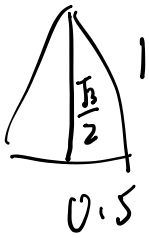
$$\sqrt{x}+\sqrt{y}=1$$

$$y=(1-\sqrt{x})^2$$

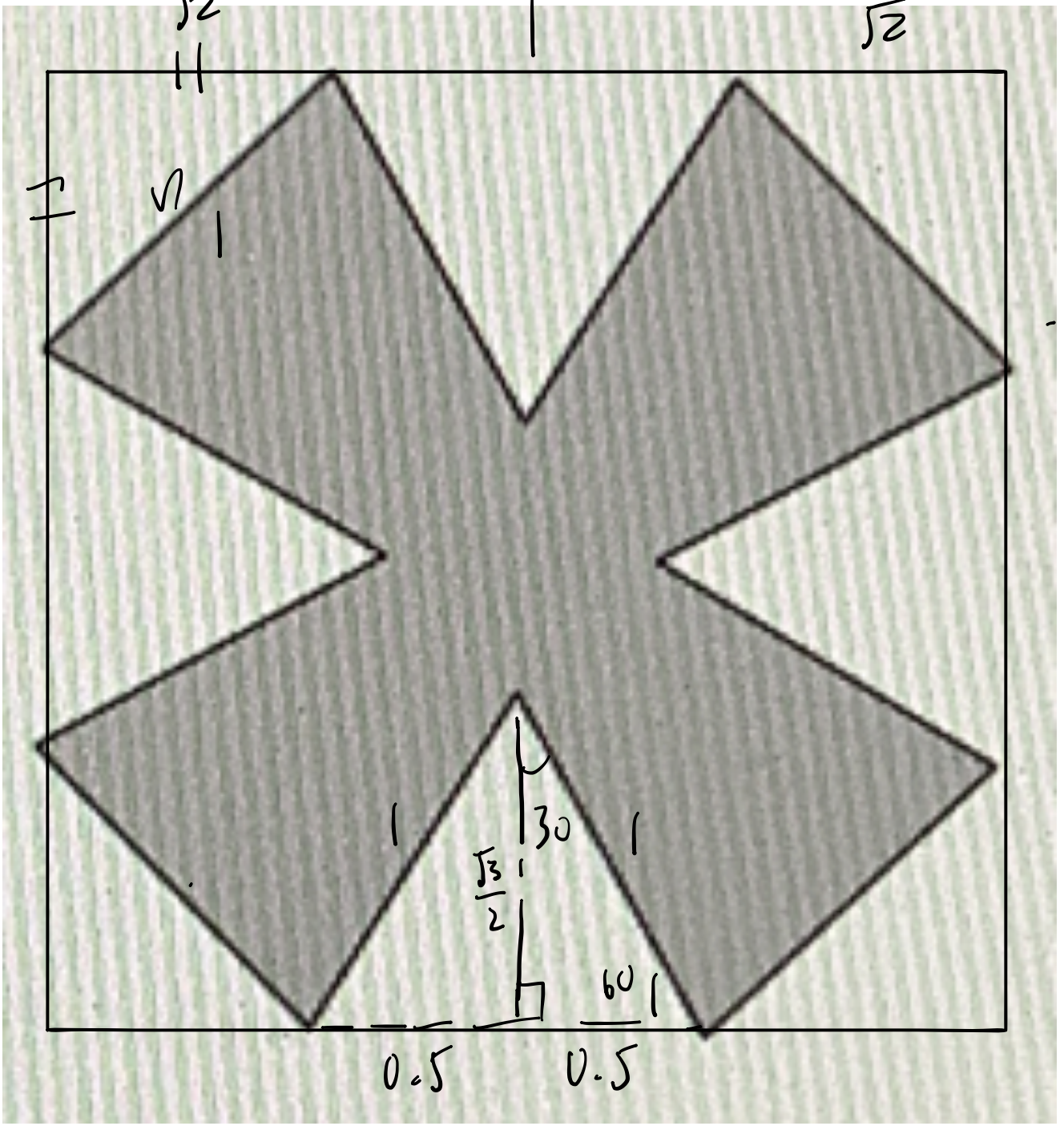
也⇒B x越大，

y越小

(17)



$\times 4 = \sqrt{3}$



$$2n^2 = 1$$

$$n = \sqrt{\frac{1}{2}} \quad = 2\left(\frac{1}{\sqrt{2}}\right)^2$$

$$(\sqrt{2}+1)^2 - 2\left(\frac{\sqrt{2}}{2}\right)^2 - \sqrt{3}$$

$$= 2 + 2\sqrt{2} + 1 - 1 - \sqrt{3}$$

$$\Rightarrow B$$