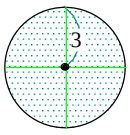
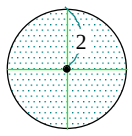
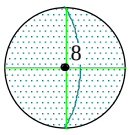
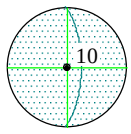
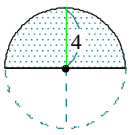
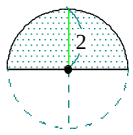
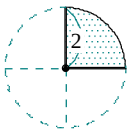
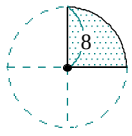
基礎数学　円の面積　課題

(　　)年(　　)組(　　)番(　　)

1．次の図形の面積を求めよ。

"•"は円，弧の中心，円周率はπとする。

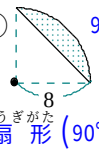
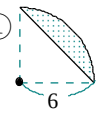
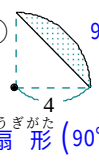
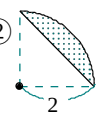
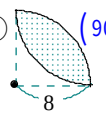
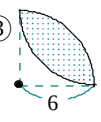
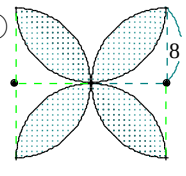
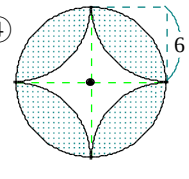
Find the area of the following figures."• " is the center of a circle or an arc.
The circular constant is π .

例題	問題
①  $\pi \times 3^2$ $= 9\pi$	① 
②  $\pi \times 4^2$ $= 16\pi$	② 
③  180°の扇形 $\pi \times 4^2 \div 2$ $= 8\pi$	③ 
④  90°の扇形 $\pi \times 2^2 \div 4$ $= \pi$	④ 
⑤  45°の扇形 $\pi \times 8^2 \div 8$ $= 8\pi$	⑤ 

2．次の図形の面積を求めよ。

"•"は円，弧の中心，円周率はπとする。

Find the area of the following figures. "• " is the center of a circle or an arc.
The circular constant is π .

例題	問題
①  90°の扇形－三角形 扇形(90°) $\pi \times 8^2 \div 4 = 16\pi$ 三角形 $8 \times 8 \div 2 = 32$ 図形の面積 $16\pi - 32$	① 
②  90°の扇形－三角形 扇形(90°) $\pi \times 4^2 \div 4 = 4\pi$ 三角形 $4 \times 4 \div 2 = 8$ 図形の面積 $4\pi - 8$	② 
③  (90°の扇形－三角形)×2 $(16\pi - 32) \times 2$ $= 32\pi - 64$	③ 
④  $(32\pi - 64) \times 4$ $= 128\pi - 256$	④ 

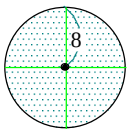
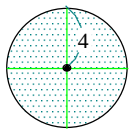
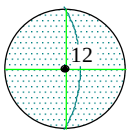
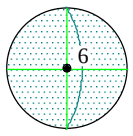
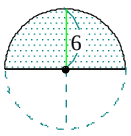
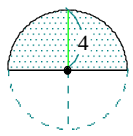
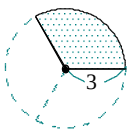
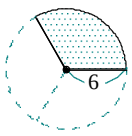
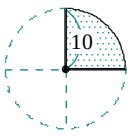
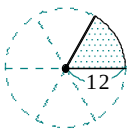
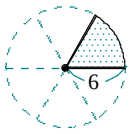
基礎数学　円の面積 2 課題

(　　)年(　　)組(　　)番(　　)

1. 次の図形の面積を求めよ。

"•"は円，弧の中心，円周率はπとする。

Find the area of the following figures."• " is the center of a circle or an arc.
The circular constant is π .

例題	問題
①  $\pi \times 8^2$ ＝ 64π	① 
②  $\pi \times 6^2$ ＝ 36π	② 
③  180°の扇形 $\pi \times 6^2 \div 2$ ＝ 18π	③ 
④  120°の扇形 $\pi \times 3^2 \div 3$ ＝ 3π	④ 
⑤  90°の扇形 $\pi \times 10^2 \div 4$ ＝ 25π	⑤ 
⑥  60°の扇形 $\pi \times 12^2 \div 6$ ＝ 24π	⑥ 

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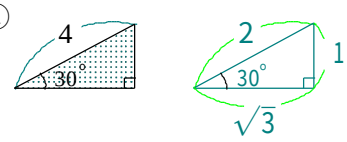
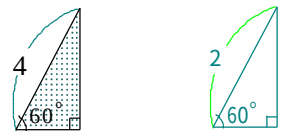
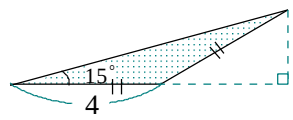
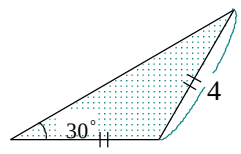
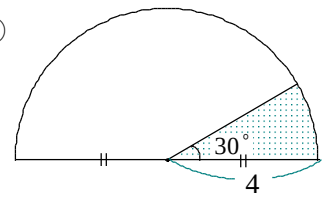
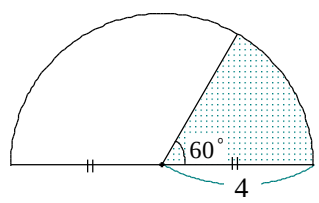
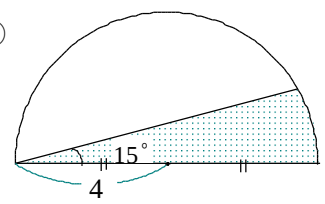
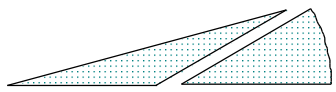
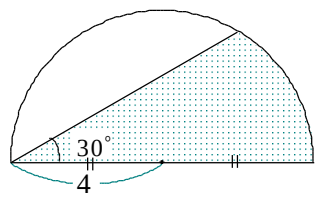
①  30°の直角三角形の2倍 底辺 $2\sqrt{3}$，高さ2 $2\sqrt{3} \times 2 \div 2$ ＝ $2\sqrt{3}$	① 
②  右は30°の直角三角形  高さ 2 より， $4 \times 2 \div 2$ ＝ 4	② 
③  $\pi \times 4^2 \div 12$ ＝ $\frac{16}{12}\pi = \frac{4}{3}\pi$	③ 
④   $4 + \frac{4}{3}\pi$	④ 

基礎数学　円の面積 3　課題

(　　)年(　　)組(　　)番(　　)

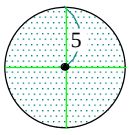
1. 次の図形の面積を求めよ。

"•"は円，弧の中心，円周率はπとする。

Find the area of the following figures."• " is the center of a circle or an arc.
The circular constant is π .

例題

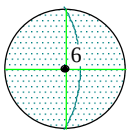
①



$\pi \times 5^2$

$= 25\pi$

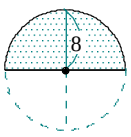
②



$\pi \times 3^2$

$= 9\pi$

③

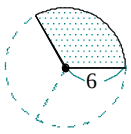


180°の扇形

$\pi \times 8^2 \div 2$

$= 32\pi$

④

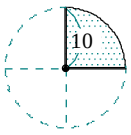


120°の扇形

$\pi \times 6^2 \div 3$

$= 12\pi$

⑤

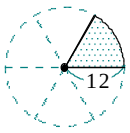


90°の扇形

$\pi \times 10^2 \div 4$

$= 25\pi$

⑥



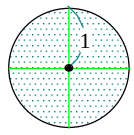
60°の扇形

$\pi \times 12^2 \div 6$

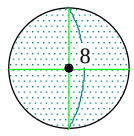
$= 24\pi$

問題

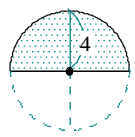
①



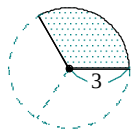
②



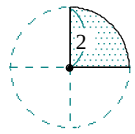
③



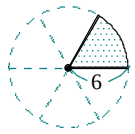
④



⑤



⑥



2. 次の図形の面積を求めよ。

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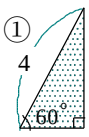
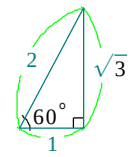
Find the area of the following figures."• " is the center of a circle or an arc.
The circular constant is π .

例題

①





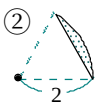
60°の基準の三角形の2倍だから

底辺 2 ，高さ $2\sqrt{3}$

$2 \times 2\sqrt{3} \div 2$

$= 2\sqrt{3}$

②



60°の扇形－三角形

扇形(60°)

$\pi \times 2^2 \div 6 = \frac{2}{3}\pi$

三角形(60°)

$2 \times \sqrt{3} \div 2 = \sqrt{3}$

図形の面積

$\frac{2}{3}\pi - \sqrt{3}$

③

60°の扇形×2－三角形

扇形(60°)

$\pi \times 4^2 \div 6 = \frac{8}{3}\pi$

三角形(60°)

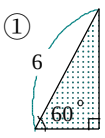
$4 \times 2\sqrt{3} \div 2 = 4\sqrt{3}$

図形の面積

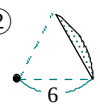
$\frac{16}{3}\pi - 4\sqrt{3}$

問題

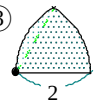
①



②



③



基礎数学　円の面積 4 課題

(　　)年(　　)組(　　)番(　　)

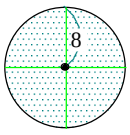
1. 次の図形の面積を求めよ。

"•"は円，弧の中心，円周率はπとする。

Find the area of the following figures."• " is the center of a circle or an arc.
The circular constant is π .

例題

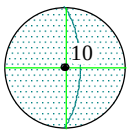
①



$\pi \times 8^2$

$= 64\pi$

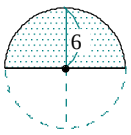
②



$\pi \times 5^2$

$= 25\pi$

③

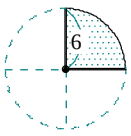


180°の扇形

$\pi \times 6^2 \div 2$

$= 18\pi$

④

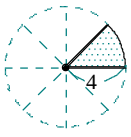


90°の扇形

$\pi \times 6^2 \div 4$

$= 9\pi$

⑤



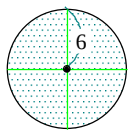
45°の扇形

$\pi \times 4^2 \div 8$

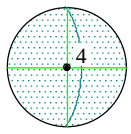
$= 2\pi$

問題

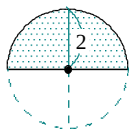
①



②



③



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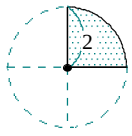
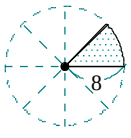


⑤



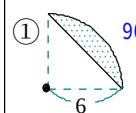
2. 次の図形の面積を求めよ。

"•"は円，弧の中心，円周率はπとする。

Find the area of the following figures."• " is the center of a circle or an arc.
The circular constant is π .

例題

①



90°の扇形－三角形

扇形(90°)

$\pi \times 6^2 \div 4 = 9\pi$

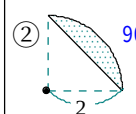
三角形

$6 \times 6 \div 2 = 18$

図形の面積

$9\pi - 18$

②



90°の扇形－三角形

扇形(90°)

$\pi \times 2^2 \div 4 = \pi$

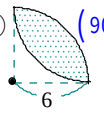
三角形

$2 \times 2 \div 2 = 2$

図形の面積

$\pi - 2$

③

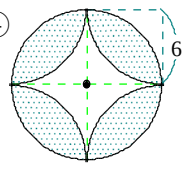


(90°の扇形－三角形)×2

$(9\pi - 18) \times 2$

$= 18\pi - 36$

④

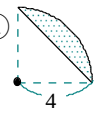


$(18\pi - 36) \times 4$

$= 72\pi - 144$

問題

①



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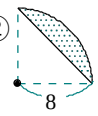

③

④