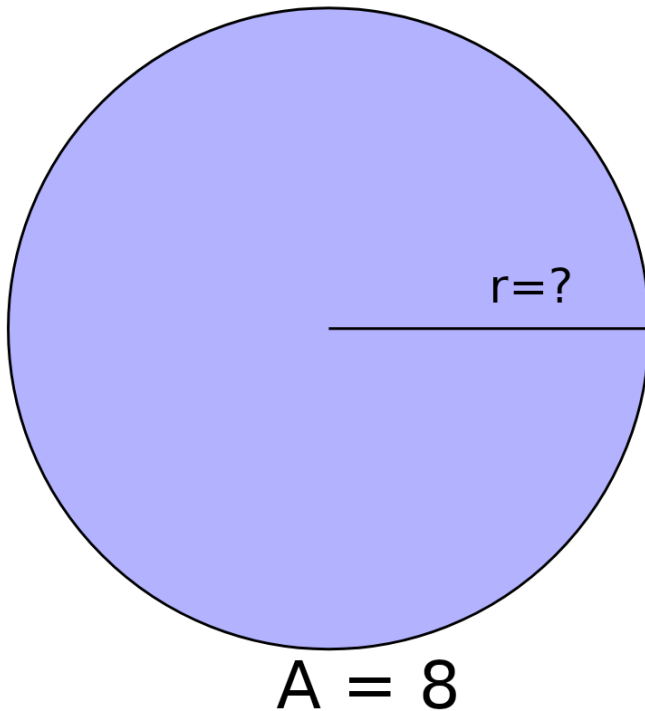




Inscribed Squares and Circles - Intro

- 1 If the area of this circle is 8, what is its radius?



A

$$r = \sqrt{\frac{8}{2 \cdot \pi}}$$

B

$$r = \sqrt{\frac{8}{\pi}}$$

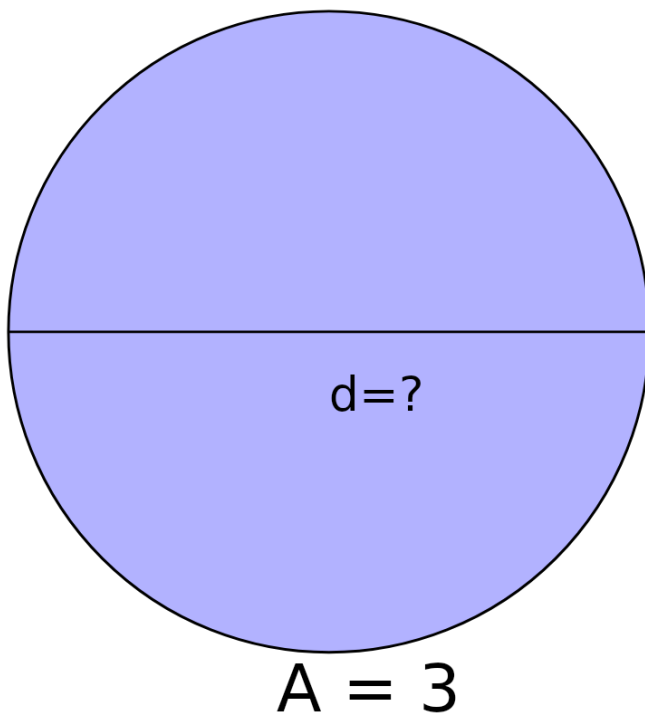
C

$$r = 8 \cdot \sqrt{\frac{2}{\pi}}$$

D

$$r = \sqrt{\frac{2 \cdot \pi}{8}}$$

- 2 If the area of this circle is 3, what is its diameter?



A

$$d = 2 \cdot \sqrt{\frac{3}{2 \cdot \pi}}$$

B

$$d = 3 \cdot \sqrt{\frac{2}{\pi}}$$

C

$$d = \sqrt{\frac{2 \cdot \pi}{3}}$$

D

$$d = 2 \cdot \sqrt{\frac{3}{\pi}}$$



Inscribed Squares and Circles - Intro

- 3** If the area of this circle is 7, what is its radius?

$$A = \pi \cdot r^2$$
$$7 = \pi \cdot r^2$$

A

$$r = 7 \cdot \sqrt{\frac{2}{\pi}}$$

B

$$r = \sqrt{\frac{2 \cdot \pi}{7}}$$

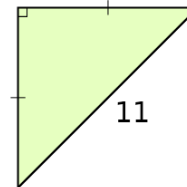
C

$$r = \sqrt{\frac{7}{2 \cdot \pi}}$$

D

$$r = \sqrt{\frac{7}{\pi}}$$

- 4** Find the length of the identical leg sides, given a hypotenuse of length 11



Side = ?

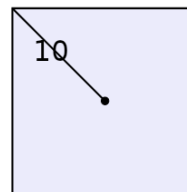
A

9.33

B

7.78

- 5** Find the length of the square sides, given a diagonal to the center of length 10



Side = ?

A

$$2 \cdot \sqrt{\frac{10^2}{2}}$$

B

$$2 \cdot \sqrt{\frac{10^2}{\sqrt{2}}}$$

- 6** If the area of this circle is 2, what is its diameter?

$$A = \pi \cdot \left(\frac{d}{2}\right)^2$$

$$2 = \pi \cdot \left(\frac{d}{2}\right)^2$$

A

$$d = 2 \cdot \sqrt{\frac{2}{\pi}}$$

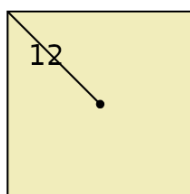
B

$$d = \sqrt{\frac{2 \cdot \pi}{2}}$$

C

$$d = 2 \cdot \sqrt{\frac{2}{2 \cdot \pi}}$$

- 7** Find the length of the square sides, given a diagonal to the center of length 12



Side = ?

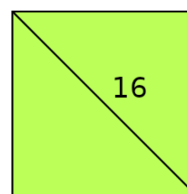
A

22.06

B

16.97

- 8** Find the length of the square sides, given a diagonal of length 16



Side = ?

A

6.79

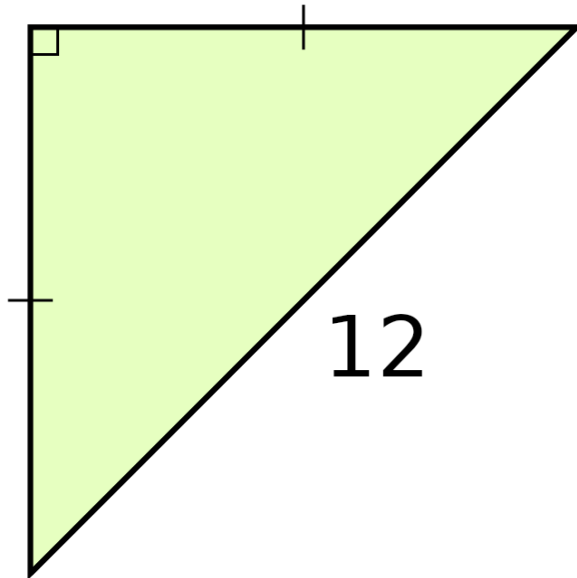
B

11.31



Inscribed Squares and Circles - Intro

- 9 Find the length of the identical leg sides, given a hypotenuse of length 12



Side = ?

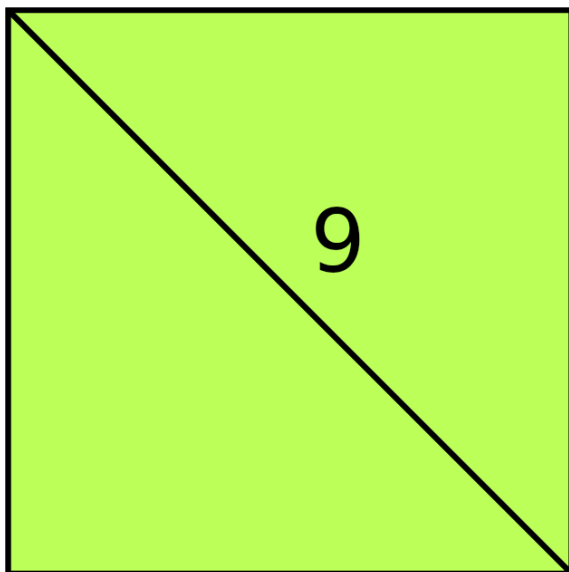
A

$$\sqrt{\frac{12^2}{2}}$$

B

$$2 \cdot \sqrt{\frac{12^2}{2}}$$

- 10 Find the length of the square sides, given a diagonal of length 9



Side = ?

A

$$\sqrt{\frac{9^2}{2}}$$

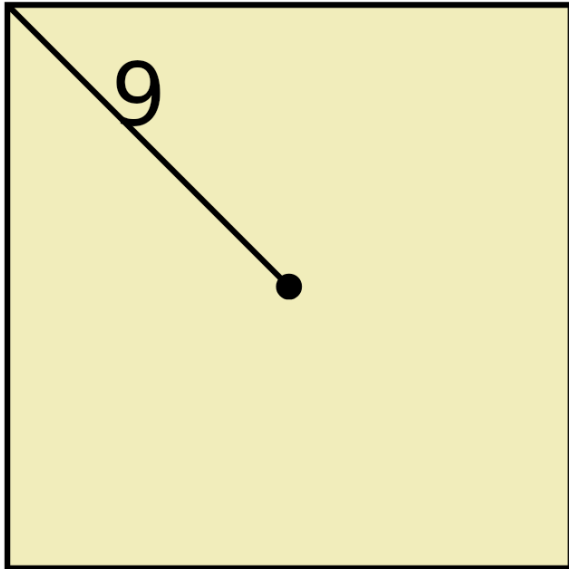
B

$$2 \cdot \sqrt{\frac{9^2}{2}}$$



Inscribed Squares and Circles - Intro

11 Find the area of the square, given a diagonal to the center of length 9



Area = ?

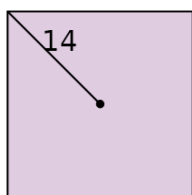
A

$$2 \cdot 9^2$$

B

$$4 \cdot \sqrt{\frac{9^2}{\sqrt{2}}}$$

12 Find the area of the square, given a diagonal to the center of length 14



Area = ?

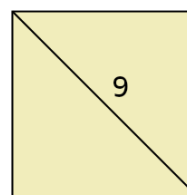
A

$$470.4$$

B

$$392$$

13 Find the area of the square, given a diagonal of length 9



Area = ?

A

$$40.5$$

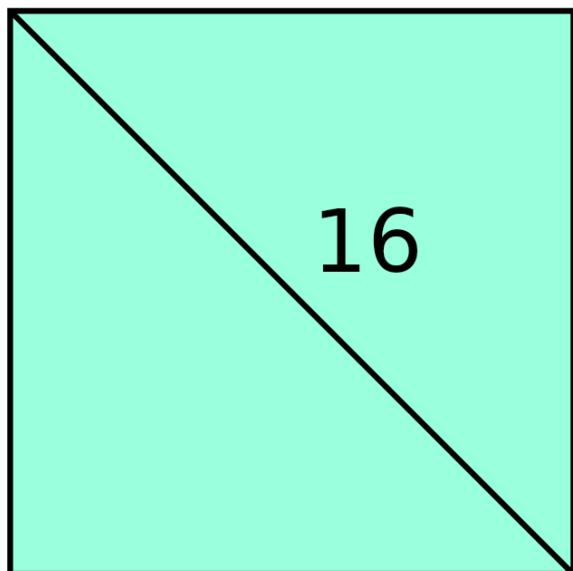
B

$$48.6$$



Inscribed Squares and Circles - Intro

14 Find the area of the square, given a diagonal of length 16



Area = ?

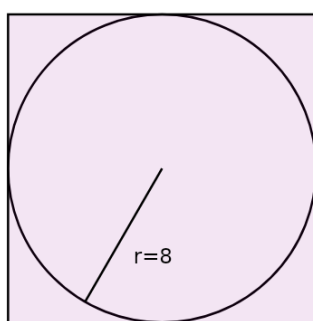
A

$$\frac{16^2}{\sqrt{2}}$$

B

$$\frac{16^2}{2}$$

15 Find the side length of a square that has an inscribed circle with radius 8



A

$$16$$

B

$$\frac{64}{2}\sqrt{2}$$

C

$$4\sqrt{32}$$

D

$$\frac{16}{\pi}$$

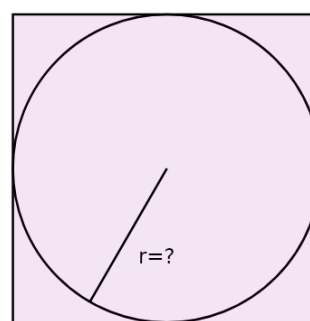
E

$$\frac{16^2}{2}\pi$$

F

$$8$$

16 Find the radius of the circle inscribed in a 6x6 square



A

$$\frac{12}{2}\sqrt{2}$$

B

$$\frac{6}{2}$$

C

$$\frac{12}{2}$$

D

$$(\sqrt{72})^2\pi$$

E

$$2\sqrt{\frac{12}{2}}$$

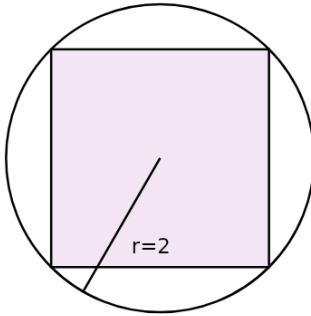
F

$$2\sqrt{\frac{12}{2\pi}}$$



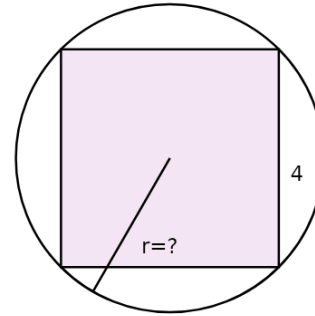
Inscribed Squares and Circles - Intro

- 17** Find the side length of a square inscribed in a circle with radius 2



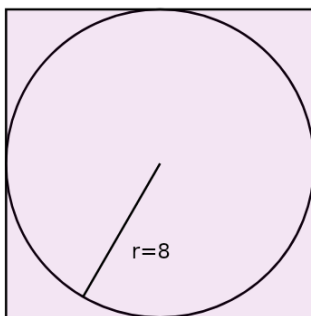
A	$2\sqrt{\frac{4}{2\pi}}$	B	$2\sqrt{\frac{2}{2\pi}}$
C	$\frac{4^2}{2}\pi$	D	$2\sqrt{\frac{2}{2}}$
E	$2\sqrt{\frac{4}{2}}$	F	$\frac{4}{2}\sqrt{2}$

- 18** Find the radius of the circle that has a 4x4 square inscribed



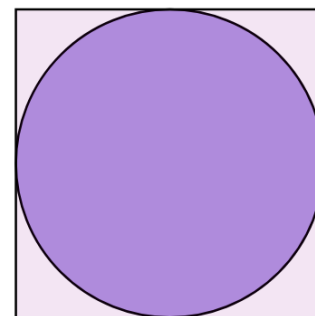
A	8π	B	$\frac{8^2}{2}\pi$
C	$\sqrt{8}$	D	$\frac{16^2}{2}\pi$
E	$\frac{8}{\pi}$	F	$\frac{16}{\pi}$

- 19** Find the area of the square that has an inscribed circle with radius 8



A	$2\sqrt{\frac{64}{2\pi}}$	B	256
C	$\frac{16}{2}\sqrt{2}$	D	$\frac{128^2}{2}\pi$
E	$\frac{64^2}{2}\pi$	F	128

- 20** Find the side length of a square that has an inscribed circle of area 3

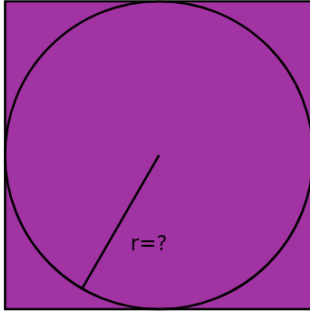


A	$\frac{9^2}{2}\pi$	B	$\frac{5^2}{2}\pi$
C	$2\sqrt{\frac{1}{\pi}}$	D	$2\sqrt{\frac{9}{2\pi}}$
E	$2\sqrt{\frac{3}{\pi}}$		



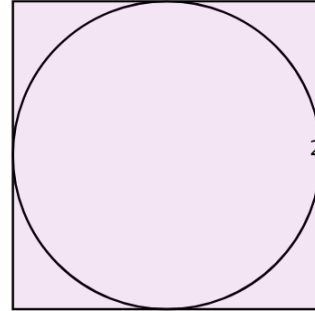
Inscribed Squares and Circles - Intro

- 21** Find the radius of the circle inscribed in a square of area 36



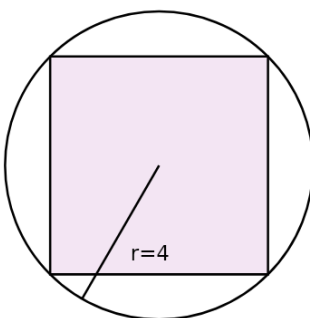
A	$\frac{12^2}{2} \pi$	B	$\frac{\sqrt{18}}{2}$
C	18π	D	$2\sqrt{\frac{12}{2}}$
E	$2\sqrt{\frac{18}{2\pi}}$	F	$\frac{\sqrt{36}}{2}$

- 22** Find the area of the circle inscribed in a 2x2 square



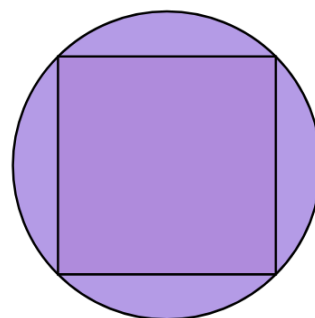
A	$(\frac{1}{2})^2 \pi$	B	$2\sqrt{\frac{8}{2\pi}}$
C	$\frac{8^2}{2} \pi$	D	$(\frac{2}{2})^2 \pi$
E	$2\sqrt{\frac{2}{2\pi}}$	F	$\frac{8}{\pi}$

- 23** Find the area of the square inscribed in a circle with radius 4



A	16	B	$2\sqrt{\frac{16}{2}}$
C	$\frac{16^2}{2} \pi$	D	$(\sqrt{8})^2 \pi$
E	$\frac{8^2}{2} \pi$	F	32

- 24** Find the side length of a square inscribed in a circle of area 6

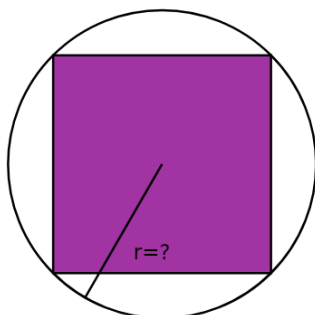


A	$\frac{18}{\pi}$	B	$\frac{18^2}{2} \pi$
C	$2\sqrt{\frac{6}{2\pi}}$	D	$\frac{12}{\pi}$
E	$2\sqrt{\frac{12}{2\pi}}$	F	$2\sqrt{\frac{72}{2\pi}}$



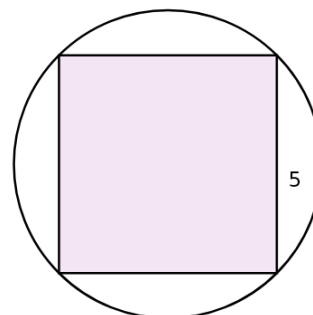
Inscribed Squares and Circles - Intro

25 Find the radius of the circle with a square of area 4 inscribed



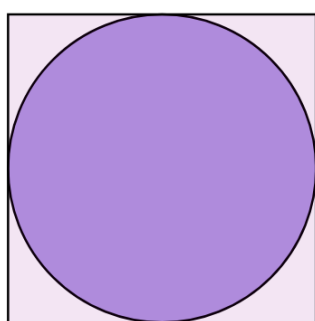
A	$(\sqrt{4})^2\pi$	B	$\frac{4}{2}\sqrt{2}$
C	4	D	$\frac{4^2}{2}\pi$
E	$\frac{4}{4}\sqrt{2}$	F	$\frac{8}{4}\sqrt{2}$

26 Find the area of the circle that has a 5x5 square inscribed



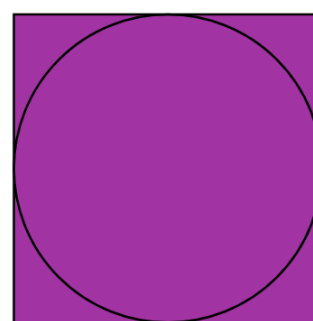
A	$\frac{2^2}{2}\pi$	B	$4\sqrt{50}$
C	$\frac{5^2}{2}\pi$	D	10
E	$2\sqrt{\frac{13}{2\pi}}$	F	$\frac{13^2}{2}\pi$

27 Find the area of the square that has an inscribed circle of area 5



A	$\frac{25^2}{2}\pi$	B	$\frac{20}{\pi}$
C	$\frac{13^2}{2}\pi$	D	$4\sqrt{10}$
E	$\frac{10}{\pi}$	F	$\frac{50}{2}\sqrt{2}$

28 Find the area of the circle inscribed in a square of area 9



A	$\frac{9}{4}\pi$	B	$\frac{9}{\pi}$
C	$\frac{5}{\pi}$	D	$\frac{18}{4}\pi$
E	$\frac{18}{\pi}$	F	5π