

Circles: Area, Squaring & Pi

Starter (1 of 3)

1. $4 \times 4 = ?$

2. $7 \times 7 = ?$

3. $10^2 = ?$

4. $3^2 = ?$

Starter (1 of 3)

1. $4 \times 4 = 16$

2. $7 \times 7 = 49$

3. $10^2 = 100$

4. $3^2 = 9$

Starter (2 of 3)

5. 2×6 and 6^2 — are these the same?

6. $3.14 \times 9 = \underline{\hspace{2cm}}$

7. $3.14 \times 25 = \underline{\hspace{2cm}}$

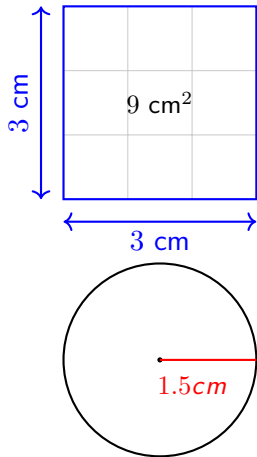
Starter (2 of 3)

5. 2×6 and 6^2 — are these the same? No: $12 \neq 36$.

6. $3.14 \times 9 = 28.26$

7. $3.14 \times 25 = 78.5$

Starter (3 of 3)



7. A **circle** has **diameter** 14 cm. Find:

- (a) the **radius** _____
(b) the **circumference** _____.

($\pi \approx 3.14$)

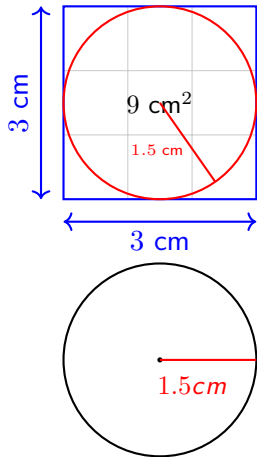
8. A **circle** has **radius** 5 cm. What is the **circumference**? _____

9. The **square** has side 3 cm and **area** 9 cm².

A **circle** has **radius** 1.5 cm. Is the

circle's area more or less than 9 cm²?

Starter (3 of 3)



7. A **circle** has **diameter** 14 cm. Find:

(a) the **radius** 7 cm

(b) the **circumference** 43.96 cm.

($\pi \approx 3.14$)

8. A **circle** has **radius** 5 cm. What is the **circumference**? 31.4 cm

9. The **square** has side 3 cm and **area** 9 cm².

A **circle** has **radius** 1.5 cm. Is the

circle's area more or less than 9 cm²?

Starter (1 of 3)

1. Halve 12 cm _____
2. Halve 9.4 cm _____
3. $6^2 = ?$

Starter (1 of 3)

1. Halve 12 cm **6 cm**
2. Halve 9.4 cm **4.7 cm**
3. $6^2 =$ **36**

Starter (2 of 3)

4. $1.5^2 = ?$

5. $3 \times 4^2 = \underline{\hspace{1cm}}$

6. True or false? $\pi \times (2r) = 2 \times \pi \times r$

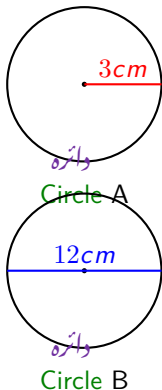
Starter (2 of 3)

4. $1.5^2 = 2.25$

5. $3 \times 4^2 = 48$

6. True or false? $\pi \times (2r) = 2 \times \pi \times r$ True

Starter (3 of 3)

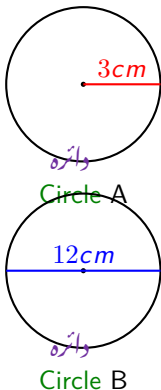


7. Consider **circle A**
- (a) What is the **circumference**? _____
- (b) What is the **area**? _____

8. Consider **circle B**
- (a) What is the **circumference**? _____
- (b) What is the **area**? _____

9. Is the **ratio** of the **circumferences** of **circle's** A and B the same as the **ratio** of the **areas**?

Starter (3 of 3)



7. Consider **circle A**
- (a) What is the **circumference**? **18.84 cm**
- (b) What is the **area**? **28.26 cm²**

8. Consider **circle B**
- (a) What is the **circumference**? **37.68 cm**
- (b) What is the **area**? **113.04 cm²**

9. Is the **ratio** of the **circumferences** of circle's

A and B the same as the **ratio** of the

areas? **No: 1 : 2 vs 1 : 4.**

Starter (1 of 3)

1. $5 \times 5 = ?$

2. $8^2 = ?$

3. $2.5^2 = ?$

Starter (1 of 3)

1. $5 \times 5 = 25$

2. $8^2 = 64$

3. $2.5^2 = 6.25$

Starter (2 of 3)

4. $3.14 \times 9 = \underline{\hspace{2cm}}$

5. ^{رقبه}Area of a 7 cm $\times$ 4 cm ^{مستطيل}rectangle =?

6. What ^{كسر}fraction of 360° is 90° ?

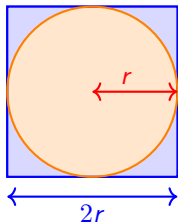
Starter (2 of 3)

4. $3.14 \times 9 = 28.26$

5. ^{رقبه}Area of a 7 cm $\times$ 4 cm ^{مستطيل}rectangle = 28 cm^2

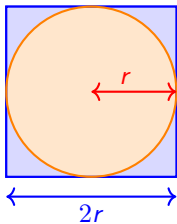
6. What ^{كسر}fraction of 360° is 90° ? $\frac{1}{4}$

Starter (3 of 3)



7. Write an **expression** for the **area** of the **circle** in the picture
8. Write an **expression** for the **area** of the shaded blue region in the picture
9. If the **square** has a **perimeter** of 48cm, what is the **area** of the shaded blue region?

Starter (3 of 3)



7. Write an **expression** for the **area** of the **circle** in the picture πr^2
- اظهار رقبه دائره

8. Write an **expression** for the **area** of the shaded blue region in the picture $4r^2 - \pi r^2$
- اظهار رقبه

9. If the **square** has a **perimeter** of 48cm, what is the **area** of the shaded blue region? 30.96 cm^2
- مربع احاطه رقبه

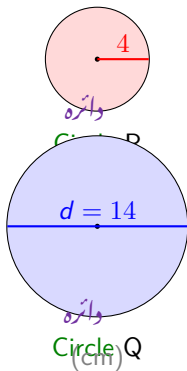
Starter (1 of 3)

1. $9^2 = ?$
2. $3.5^2 = ?$
3. 3.14×16
4. 3.14×49

Starter (1 of 3)

1. $9^2 = 81$
2. $3.5^2 = 12.25$
3. $3.14 \times 16 = 50.24$
4. $3.14 \times 49 = 153.86$

Starter (2 of 3)



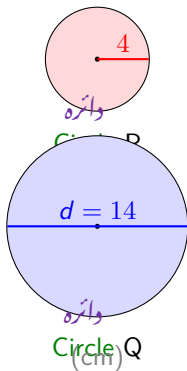
5. Halve 14 cm. Then ^{مربع}square your answer.

6. A ^{مربع}square has ^{رقبه}area 64 cm^2 . What is its side length ?

7. **Spot the mistake:** ^{دائره}“Circle Q has ^{قطر}diameter 14 cm, so its ^{رقبه}area is

$\pi \times 14^2 \approx 615 \text{ cm}^2$.” What error was made? Write the correct solution.

Starter (2 of 3)



5. Halve 14 cm. Then **مربع** square your answer.

7 cm, so 49 cm^2

6. A **مربع** square has **رقبه** area 64 cm^2 . What is its side length **8 cm**

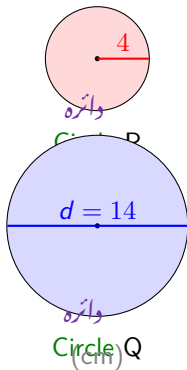
7. **دائرة** Spot the mistake: “**دائرة** Circle Q has **قطر** diameter 14 cm, so its **رقبه** area is

$\pi \times 14^2 \approx 615 \text{ cm}^2$.” What error was

made? Write the correct solution. **Used**

نصف قطر diameter not radius **قطر**

Starter (3 of 3)

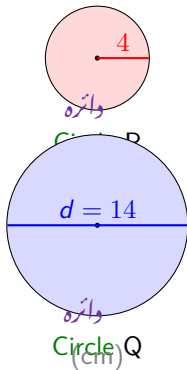


8. **Circle P**, **radius** 4 cm. Find: (a) the **area** _____ (b) the **circumference** _____.

9. **Circle Q**, **diameter** 14 cm. Find: (a) the **area** _____ (b) the **circumference** _____.

10. Which has the greater **area**, P or Q? By approximately how many cm^2 ?

Starter (3 of 3)



8. **Circle P**, radius 4 cm. Find: (a) the area 50.24 cm² (b) the circumference 25.12 cm.

9. **Circle Q**, diameter 14 cm. Find: (a) the area 153.86 cm² (b) the circumference 43.96 cm.

10. Which has the greater area, P or Q? By approximately how many cm²? Q, by approximately 103.62 cm².