



GRADE 7 · GEOMETRY · HOMEWORK

AREA OF A CIRCLE

Today's goal: I can find the area of a circle to solve problems, including by using the formula for area of a circle and give an informal derivation of the relationship between the circumference and area of a circle.



Pick your peppers!

Everyone does Mild & Medium. Then climb as high as you can.

**Mild**

Tan the Turtle

**Medium**

Digit the Fox

**Spicy**

Blaze the Dragon

**REMEMBER**

$A = \pi r^2$, always the radius, always squared. Halve a diameter first. Area is in square units. Doubling the radius quadruples the area.

**FAMILY CORNER**

No need to remember this math yourself! Ask your student to teach you Mr DJ's example, then try the first Mild problem together.

**MILD****Tan the Turtle:** Slow and steady. Warm up!

- 1 Find the area of a circle with radius 9 cm.

Answer

**OOPS ALERT**

Careful on #1! Blaze spotted the slip Mr DJ sees most: Answered 18π , the circumference.



MEDIUM

Digit the Fox: Stretch your brain.

- 2 Find the area of a circle with diameter 18 cm.

Answer

- 3 Find the area of a circle with radius $\frac{1}{2}$ m.

Answer

- 4 A circle has area 36π cm². Find its radius.

Answer

- 5 Find the area of a semicircle with radius 5 cm.

Answer

- 6 A circle has radius 10 cm. Find both its area and its circumference.

Answer



SPICY

Blaze the Dragon: Bring the heat!

- 7 Using question 6, explain how to tell at a glance which answer is the area.

Answer

- 8 A pizza of diameter 12 inches costs \$9. One of diameter 24 inches costs \$30. Which is better value? Show your reasoning.

Answer



How did this sheet feel?

☐ Easy for me ☐ Just right ☐ Made me think

Stuck? Watch Mr DJ explain it

Step-by-step video lessons on YouTube: [youtube.com/@MathWithMrDJ](https://www.youtube.com/@MathWithMrDJ)

Brain break: daily puzzles

Three new math puzzles every day, free: puzzles.mathwithmrdj.com