Angle Measure with Reference to a Circle

Explore ideas and representations

Name _____ **Date** _____ **Score** _____ / 6

QUICK REVIEW

One full turn is $360°$. A sector is a slice of a circle. Divide 360 by the number of equal sectors to find the degrees in one sector. Multiply by the number of sectors crossed. Clockwise follows the hands of a clock; counterclockwise goes the other way.

Worked example

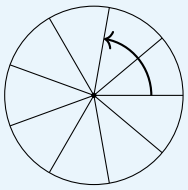
The arrow crosses 2 of 9 equal sectors. Give the angle in degrees and as a fraction of a full turn.

1. A full turn is $360°$, so each sector measures $360 \div 9 = 40°$.

2. Multiply by the number of sectors crossed: $2 \times 40 = 80°$.

3. The turn covers 2 out of 9 equal sectors, or $\frac{2}{9}$ of a full turn.

Answer: $80°$; $\frac{2}{9}$ of a full turn.

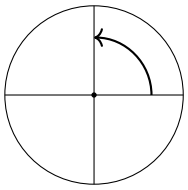


9 equal sectors

Practice Problems

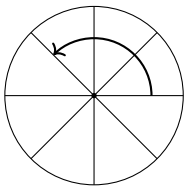
Show your thinking.

1. Find the angle in degrees of one of four equal sectors.



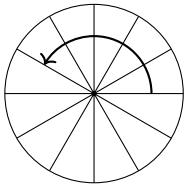
4 equal sectors

2. How many degrees does the arrow turn across three of these eight equal sectors?



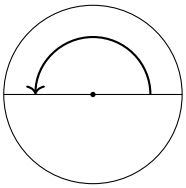
8 equal sectors

3. What angle in degrees covers five of these twelve equal sectors?



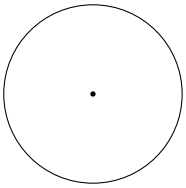
12 equal sectors

4. A student says a half-turn is $120°$. Correct the measure using a full circle.

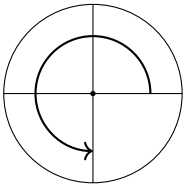


2 equal sectors

5. How many equal $60°$ sectors fill a full circle?



6. A wheel turns through three quarter-circle sectors. How many degrees does it turn?



4 equal sectors

Answer Key

1. $90°$.
2. $135°$.
3. $150°$.
4. $180°$.
5. 6 sectors.
6. $270°$.

Step-by-Step Solutions

Follow each calculation, then check your own work.

Problem 1

1. A full turn is $360°$, so each sector measures $360 \div 4 = 90°$.
2. Multiply by the number of sectors crossed: $1 \times 90 = 90°$.

Problem 2

1. A full turn is $360°$, so each sector measures $360 \div 8 = 45°$.
2. Multiply by the number of sectors crossed: $3 \times 45 = 135°$.

Problem 3

1. A full turn is $360°$, so each sector measures $360 \div 12 = 30°$.
2. Multiply by the number of sectors crossed: $5 \times 30 = 150°$.

Problem 4

1. A full circle measures $360°$.
2. A half-turn is one of 2 equal parts: $360 \div 2 = 180°$.
3. Two half-turns give $180 + 180 = 360°$.

Problem 5

1. The full circle contains $360°$.
2. $360 \div 60 = 6$ equal sectors.
3. $6 \times 60 = 360°$ checks the partition.

Problem 6

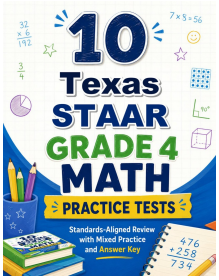
1. A full turn is $360°$, so each sector measures $360 \div 4 = 90°$.
2. Multiply by the number of sectors crossed: $3 \times 90 = 270°$.

TESTINAR

Keep Building Grade 4 Math Skills

Choose the practice book matched to your state assessment and turn worksheet practice into a complete test-prep plan.

All Grade 4 books



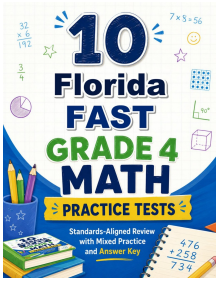
TEXAS STAAR

10 Full-Length Math Practice Tests

Build Grade 4 accuracy, confidence, and test stamina with 10 printable practice tests.

Printable eBook • Instant PDF access

View eBook



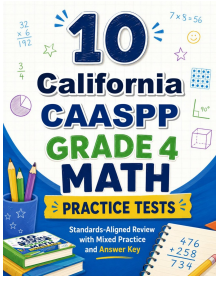
FLORIDA FAST

10 Full-Length Math Practice Tests

Build Grade 4 accuracy, confidence, and test stamina with 10 printable practice tests.

Printable eBook • Instant PDF access

View eBook



CALIFORNIA CAASPP

10 Full-Length Math Practice Tests

Build Grade 4 accuracy, confidence, and test stamina with 10 printable practice tests.

Printable eBook • Instant PDF access

View eBook

Need a different state?
Testinar has Grade 4 math practice books for state assessments across the country.

TESTINAR.COM/GRADES/4