

Desert Adventures: The Quest for Perfect Angles

Math

Grade 4

Desert Theme

Help the Desert Dwellers complete their angular adventures by solving each angle challenge they encounter on their journey through the scorching sands!

NAME _____

DATE _____

SCORE _____ / 8

1

Camel Carl is standing at an oasis and needs to turn to face three different palm trees. He starts facing north, then turns 45 degrees to the right to face the first palm tree. Then he turns another 35 degrees to the right to face the second palm tree. What is the total angle Carl has turned from his starting position?

2

Desert Dina is mapping out a trail for the caravan. She draws two paths that meet at a point near a dune. One path makes a 90-degree angle with the horizon line, and the other path makes a 35-degree angle with the same horizon line. What is the angle between the two paths?

3

Scorpion Sam found an ancient compass rose marked on a rock. The compass shows four directions: North at 0 degrees, East at 90 degrees, South at 180 degrees, and West at 270 degrees. If Sam needs to travel from North to a point that is 180 degrees away, what direction is he heading?

4

The Desert Architect is building a shelter with a triangular roof. Two of the angles in the roof triangle are 55 degrees and 65 degrees. What must be the measurement of the third angle? (Hint: All angles in a triangle add up to 180 degrees.)

5

Lizard Leo is climbing a rock formation. At the bottom of the rock, there's a 90-degree angle. He climbs up one side which makes a 35-degree angle with the ground. What angle does his climbing path make with the other side of the right angle?

6

The Desert Dancers are performing at sunset. They stand in a circle and turn to face each other. If there are 4 dancers equally spaced around the circle, what angle must each dancer turn to face the dancer on their right? (Hint: A full circle is 360 degrees.)

7

Scorching Sally is creating a sun dial in the sand. The shadow of the stick points due north in the morning. By noon, the shadow has rotated 180 degrees. How many more degrees must the shadow rotate to point west (which is 270 degrees from north)?

8

The Desert Explorer found an ancient map with three marked routes forming a straight line at a fork in the road. Two of the angles created at the fork measure 60 degrees and 70 degrees on one side of the line. What is the angle on the other side of the line? (Hint: Angles on a straight line add up to 180 degrees.)

Answer Key

Math

Grade 4

For Parents and Teachers

1

Camel Carl is standing at an oasis and needs to turn to face three different palm trees. He starts facing north, then turns 45 degrees to the right to face the first palm tree. Then he turns another 35 degrees to the right to face the second palm tree. What is the total angle Carl has turned from his starting position?

ANSWER

80 degrees

2

Desert Dina is mapping out a trail for the caravan. She draws two paths that meet at a point near a dune. One path makes a 90-degree angle with the horizon line, and the other path makes a 35-degree angle with the same horizon line. What is the angle between the two paths?

ANSWER

55 degrees

3

Scorpion Sam found an ancient compass rose marked on a rock. The compass shows four directions: North at 0 degrees, East at 90 degrees, South at 180 degrees, and West at 270 degrees. If Sam needs to travel from North to a point that is 180 degrees away, what direction is he heading?

ANSWER

South

4

The Desert Architect is building a shelter with a triangular roof. Two of the angles in the roof triangle are 55 degrees and 65 degrees. What must be the measurement of the third angle? (Hint: All angles in a triangle add up to 180 degrees.)

ANSWER

60 degrees

5

Lizard Leo is climbing a rock formation. At the bottom of the rock, there's a 90-degree angle. He climbs up one side which makes a 35-degree angle with the ground. What angle does his climbing path make with the other side of the right angle?

ANSWER

55 degrees

6

The Desert Dancers are performing at sunset. They stand in a circle and turn to face each other. If there are 4 dancers equally spaced around the circle, what angle must each dancer turn to face the dancer on their right? (Hint: A full circle is 360 degrees.)

ANSWER

90 degrees

7

Scorching Sally is creating a sun dial in the sand. The shadow of the stick points due north in the morning. By noon, the shadow has rotated 180 degrees. How many more degrees must the shadow rotate to point west (which is 270 degrees from north)?

ANSWER

90 degrees

8

The Desert Explorer found an ancient map with three marked routes forming a straight line at a fork in the road. Two of the angles created at the fork measure 60 degrees and 70 degrees on one side of the line. What is the angle on the other side of the line? (Hint: Angles on a straight line add up to 180 degrees.)

ANSWER

50 degrees