

# Arctic Adventure: Angles with Polar Friends

Math

Grade 4

Arctic Theme

Help our Arctic friends navigate their icy world by solving these angle adventures!

NAME \_\_\_\_\_

DATE \_\_\_\_\_

SCORE \_\_\_\_\_ / 8

1

Pippa the polar bear is building an ice fort and needs to position two walls. One wall points north, and the other wall turns 90 degrees to point east. What is the angle between Pippa's two walls?

  
  

2

Kai the Arctic fox is tracking a seal across the ice. He walks in one direction, then turns to face a direction that is completely opposite. What angle did Kai turn through?

  
  

3

Three Arctic terns are sitting on an ice floe. They are evenly spaced around a circle. What angle is formed between each pair of neighboring birds when measured from the center of the ice floe?

  
  

4

Suka the seal is diving down to find fish. She starts swimming horizontally, then angles her body downward 45 degrees. Her friend Tuk angles down 35 degrees. What is the difference between their diving angles?

  
  

5

An Arctic wolf pack is howling in formation. They create four angles around a frozen pond: 60 degrees, 75 degrees, 80 degrees, and one unknown angle. If these four angles form a complete rotation around the pond, what is the missing angle?

  
  

6

Nuka the narwhal is drawing patterns in the snow with his tusk. He creates a triangle in the ice. One angle measures 50 degrees and another measures 65 degrees. What is the third angle of Nuka's triangle?

7

A penguin waddles along the ice in a zigzag pattern. At the first turn, he makes a 120-degree angle. At the second turn, he makes a 110-degree angle. If he continues and makes one more turn that creates a straight line, what angle should his third turn be?

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8

Two Arctic glaciers meet at a point. One glacier's edge runs at a 35-degree angle from north. The other glacier's edge runs at an 80-degree angle from north. What is the angle between where the two glaciers meet?

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# Answer Key

Math

Grade 4

For Parents and Teachers

1

Pippa the polar bear is building an ice fort and needs to position two walls. One wall points north, and the other wall turns 90 degrees to point east. What is the angle between Pippa's two walls?

ANSWER

90 degrees

2

Kai the Arctic fox is tracking a seal across the ice. He walks in one direction, then turns to face a direction that is completely opposite. What angle did Kai turn through?

ANSWER

180 degrees

3

Three Arctic terns are sitting on an ice floe. They are evenly spaced around a circle. What angle is formed between each pair of neighboring birds when measured from the center of the ice floe?

ANSWER

120 degrees

4

Suka the seal is diving down to find fish. She starts swimming horizontally, then angles her body downward 45 degrees. Her friend Tuk angles down 35 degrees. What is the difference between their diving angles?

ANSWER

10 degrees

5

An Arctic wolf pack is howling in formation. They create four angles around a frozen pond: 60 degrees, 75 degrees, 80 degrees, and one unknown angle. If these four angles form a complete rotation around the pond, what is the missing angle?

ANSWER

145 degrees

6

Nuka the narwhal is drawing patterns in the snow with his tusk. He creates a triangle in the ice. One angle measures 50 degrees and another measures 65 degrees. What is the third angle of Nuka's triangle?

ANSWER

65 degrees

7

A penguin waddles along the ice in a zigzag pattern. At the first turn, he makes a 120-degree angle. At the second turn, he makes a 110-degree angle. If he continues and makes one more turn that creates a straight line, what angle should his third turn be?

ANSWER

50 degrees

8

Two Arctic glaciers meet at a point. One glacier's edge runs at a 35-degree angle from north. The other glacier's edge runs at an 80-degree angle from north. What is the angle between where the two glaciers meet?

ANSWER

45 degrees

