Merit Tutoring

Year 4 Mathematics

Worksheet 43: Naming & Classifying Angles

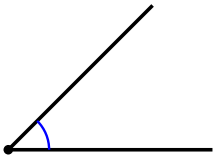
Australian Curriculum v9.0 — AC9M4M04

Name: _____ Date: _____

Section 1: Fluency — Identifying Angle Types

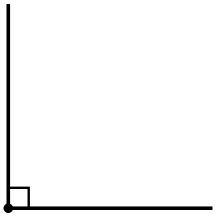
Look at each angle carefully. Name each angle using the words: Acute, Right, Obtuse, Straight, or Reflex.

1. What type of angle is shown?



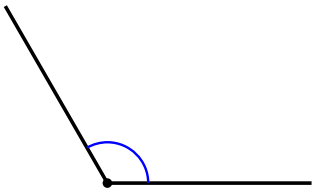
Answer: _____

2. What type of angle is shown?



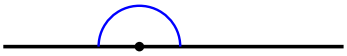
Answer: _____

3. What type of angle is shown?



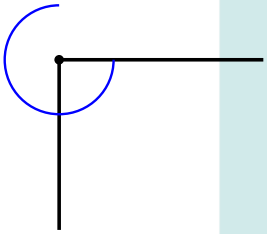
Answer: _____

4. What type of angle is shown?



Answer: _____

5. What type of angle is shown?



Answer: _____

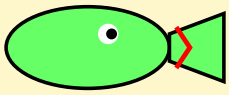
6. Draw an acute angle in the space below.

7. Draw a right angle in the space below. (Remember to mark it with a small square!)

8. Which is bigger: an acute angle or an obtuse angle?

Answer: _____

Reward Box



Angle Architect!

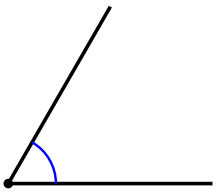
Why was the obtuse angle so upset?

Because it was never 'right'!

Section 2: Reasoning — Right Angle Comparison

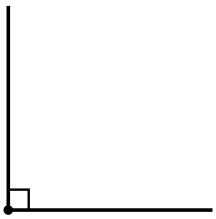
Compare each angle to a right angle. Is the angle smaller than, equal to, or larger than a right angle?

9. Compare this angle to a right angle.



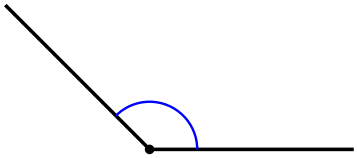
Answer: This angle is _____ a right angle.

10. Compare this angle to a right angle.



Answer: This angle is _____ a right angle.

11. Compare this angle to a right angle.



Answer: This angle is _____ a right angle.

12. A right angle measures exactly how many degrees?
Answer: _____ degrees

13. True or False: An acute angle is smaller than a right angle.
Answer: _____

14. True or False: An obtuse angle is larger than a right angle but smaller than a straight angle.
Answer: _____

15. If you have a square corner (like on a piece of paper), what type of angle does it show?
Answer: _____

16. Look at the angles of the letter ”L”. What type of angle does it make?
Answer: _____

Reward Box

Turning Trendsetter!

What do you call an angle that's been to the beach?

A tan-gent!

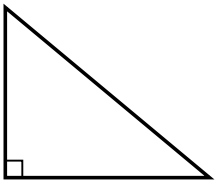
Section 3: Fluency — Angles in Shapes

Look at the shapes below and identify the angles inside them.

17. Look at this rectangle. How many right angles does it have?

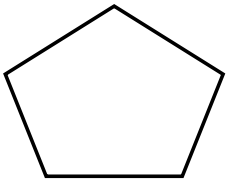
Answer: _____ right angles

18. Look at this triangle. Circle or mark the right angle.



Did you find the right angle? Answer: _____

19. Look at this pentagon. What type of angles does it have? (Choose: all acute, all obtuse, or a mix of angles)



Answer: _____

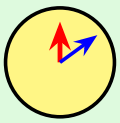
20. A square has how many right angles?
Answer: _____ right angles

21. Look around your classroom. Name one object that has a right angle.
Answer: _____

22. Draw a shape that has at least one obtuse angle.

23. Which shape has more right angles: a rectangle or a triangle?
Answer: _____

Reward Box



Angle Architect!

Why did the angle go to school?
To become more well-rounded!

End of Worksheet 43 — Great Angle Work!

Year 4 Mathematics

Worksheet 43: Answer Key

Naming & Classifying Angles

Section 1: Fluency — Identifying Angle Types

Answers with explanations

1. Answer: **Acute**

Explanation: This angle is less than 90 degrees (a right angle), so it is an acute angle.

2. Answer: **Right**

Explanation: This angle measures exactly 90 degrees, indicated by the small square at the vertex. It is a right angle.

3. Answer: **Obtuse**

Explanation: This angle is greater than 90 degrees but less than 180 degrees, making it an obtuse angle.

4. Answer: **Straight**

Explanation: This angle forms a straight line and measures exactly 180 degrees, so it is a straight angle.

5. Answer: **Reflex**

Explanation: This angle is greater than 180 degrees but less than 360 degrees, making it a reflex angle.

6. Answer: **Student should draw an angle less than 90 degrees.**

Marking guide: The angle should clearly be smaller than a right angle (square corner).

7. Answer: **Student should draw a 90-degree angle with a small square mark.**

Marking guide: The angle should show two perpendicular lines with a small square at the vertex.

8. Answer: **An obtuse angle**
Explanation: An obtuse angle is larger than a right angle (90°), while an acute angle is smaller than a right angle.

Section 2: Reasoning — Right Angle Comparison

Worked solutions

9. Answer: This angle is **smaller than** a right angle.
Explanation: The angle shown is acute (approximately 60 degrees), which is less than 90 degrees.

10. Answer: This angle is **equal to** a right angle.
Explanation: The small square symbol indicates this is exactly a right angle (90 degrees).

11. Answer: This angle is **larger than** a right angle.
Explanation: This obtuse angle (approximately 135 degrees) is greater than 90 degrees.

12. Answer: **90 degrees**
Explanation: A right angle always measures exactly 90 degrees.

13. Answer: **True**
Explanation: By definition, an acute angle is any angle that measures less than 90 degrees (a right angle).

14. Answer: **True**
Explanation: An obtuse angle measures between 90 degrees (right angle) and 180 degrees (straight angle).

15. Answer: **A right angle** (or right angle)
Explanation: A square corner, like the corner of a piece of paper, forms a

perfect 90-degree right angle.

16. Answer: **A right angle** (or right angle)
Explanation: The letter "L" forms a 90-degree angle where the vertical and horizontal lines meet.

Section 3: Fluency — Angles in Shapes

Complete answers with reasoning

17. Answer: **4 right angles**
Explanation: A rectangle has four corners, and each corner is a right angle (90 degrees).

18. Answer: **Yes** (student should have marked the right angle at the bottom left vertex)
Explanation: The right triangle shown has one right angle, indicated by the small square at the vertex where the two perpendicular sides meet.

19. Answer: **All obtuse** (or a mix, depending on the pentagon type; regular pentagons have all obtuse angles)
Explanation: In a regular pentagon, each interior angle measures 108 degrees, which is obtuse (between 90° and 180°).

20. Answer: **4 right angles**
Explanation: A square is a special rectangle with four equal sides, and each of its four corners forms a right angle.

21. Answer: **Answers will vary.**
Examples: door, window, book, desk corner, whiteboard corner, etc. Any object with a square corner is acceptable.

22. Answer: **Student drawing will vary.**
Marking guide: The shape should have at least one angle that is clearly greater than 90 degrees. Examples include obtuse triangles, pentagons,

hexagons, or irregular quadrilaterals.

23. Answer: **A rectangle**

Explanation: A rectangle has 4 right angles. Most triangles have either 0 or 1 right angle (only right triangles have 1), so a rectangle always has more.

Outstanding Achievement!

You have successfully learned to identify and classify angles as acute, right, obtuse, straight, and reflex. You can also compare angles to right angles and find angles in everyday shapes!

Year 4 Mathematics

Worksheet 44: Turns & Comparing Sizes

Australian Curriculum v9.0 — AC9M4M04

Name: _____ Date: _____

Section 1: Fluency — Fractions of a Turn

Answer questions about turns and the angles they make. A full turn is 360 degrees.

1. If I make a quarter turn ($\frac{1}{4}$ of a full turn), how many degrees have I turned?

Working: _____

Answer: _____ degrees

2. What is the name of the angle made by a quarter turn?

Answer: _____

3. If I make a half-turn ($\frac{1}{2}$ of a full turn), how many degrees have I turned?

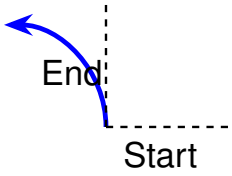
Working: _____

Answer: _____ degrees

4. What is the name of the angle made by a half turn?

Answer: _____

5. Look at this turning arrow. What fraction of a full turn has been made?



Answer: _____ of a full turn

6. A full turn is how many degrees?

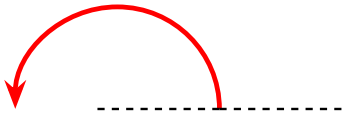
Answer: _____ degrees

7. If I make a three-quarter turn ($\frac{3}{4}$ of a full turn), how many degrees have I turned?

Working: _____

Answer: _____ degrees

8. Look at this turning arrow. How many degrees has it turned?



Answer: _____ degrees

Reward Box

Turning Trendsetter!

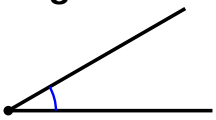
Why did the angle refuse to turn around?
Because it didn't want to be called 'obtuse'!

Section 2: Reasoning — Ordering Angles

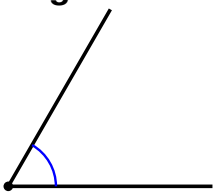
Look at the angles and compare their sizes. Order them from smallest to largest.

9. Look at these three acute angles. Label them A, B, and C, then order them from smallest to largest.

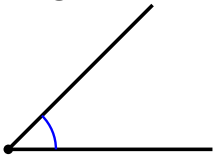
Angle A:



Angle B:



Angle C:



Answer: Smallest to largest: _____

10. Which is larger: a right angle or an obtuse angle?

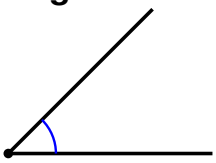
Answer: _____

11. Which is smaller: an acute angle or a straight angle?
Answer: _____

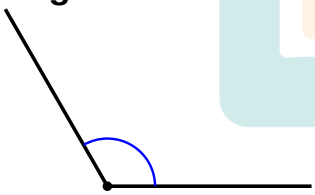
12. Order these angle types from smallest to largest: Straight, Acute, Obtuse, Right.
Answer: _____

13. Look at these two angles. Which one is larger?

Angle X:



Angle Y:



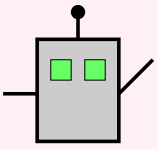
Answer: Angle _____ is larger.

14. True or False: A reflex angle is larger than a straight angle.
Answer: _____

15. If an angle measures 85 degrees, is it acute, right, or obtuse?
Answer: _____

16. If an angle measures 95 degrees, is it acute, right, or obtuse?
Answer: _____

Reward Box



Angle Architect!

What's an angle's favorite game?
Hide and 'acute'!

Section 3: Challenge — Real-world Turns

Apply your knowledge of angles to solve real-world problems.

17. A clock shows 3:00. What angle do the hour hand and minute hand make? (Hint: Think about a quarter turn)

Working: _____

Answer: _____ degrees

18. A clock shows 6:00. What angle do the hour hand and minute hand make?

Working: _____

Answer: _____ degrees

19. You are facing North. You turn clockwise to face East. What type of turn have you made?

Answer: _____ turn

20. You are facing South. You turn to face North. How many degrees have you turned?

Working: _____

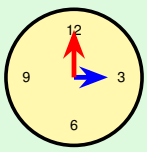
Answer: _____ degrees

21. A door opens from being closed to being wide open (forming a straight line with the wall). What angle has the door turned through?
Answer: _____ degrees

22. If you spin around completely once, you have made a full turn. This is called a revolution. How many degrees is a revolution?
Answer: _____ degrees

23. A car turns left at an intersection. The car was heading North and is now heading West. What type of angle turn did the car make?
Answer: _____

Reward Box



Turning Trendsetter!

Why was the math book always turning pages?
Because it wanted to find the 'right' angle!

End of Worksheet 44 — Fantastic Angle Skills!

Year 4 Mathematics

Worksheet 44: Answer Key

Turns & Comparing Sizes

Section 1: Fluency — Fractions of a Turn

Worked solutions

1. Answer: **90 degrees**

Working: A full turn = 360 degrees. A quarter turn = $\frac{1}{4}$ *× 360 = 90 degrees*

2. Answer: **A right angle** (or right angle)

Explanation: A quarter turn creates a 90-degree angle, which is called a right angle.

3. Answer: **180 degrees**

Working: A full turn = 360 degrees. A half turn = $\frac{1}{2}$ *× 360 = 180 degrees*

4. Answer: **A straight angle** (or straight angle)

Explanation: A half turn creates a 180-degree angle, which forms a straight line and is called a straight angle.

5. Answer: $\frac{1}{4}$ (or one-quarter, or quarter)

Explanation: The arrow has turned 90 degrees, which is one-quarter of a full 360-degree turn.

6. Answer: **360 degrees**
Explanation: A full turn (one complete revolution) equals 360 degrees.

7. Answer: **270 degrees**
Working: A full turn = 360 degrees. A three-quarter turn =

$$\frac{3}{4}$$

× 360 = 270 degrees

8. Answer: **180 degrees**
Explanation: The arrow shows a half turn (from right to left), which is 180 degrees or a straight angle.

Section 2: Reasoning — Ordering Angles

Complete answers with reasoning

9. Answer: **A, C, B** (or Angle A, Angle C, Angle B)
Explanation: Angle A is approximately 30°, Angle C is approximately 45°, and Angle B is approximately 60°. Therefore, from smallest to largest: A, C, B.

10. Answer: **An obtuse angle**
Explanation: A right angle measures 90 degrees, while an obtuse angle measures between 90 and 180 degrees, making it larger.

11. Answer: **An acute angle**
Explanation: An acute angle measures less than 90 degrees, while a straight angle measures 180 degrees, so the acute angle is smaller.

12. Answer: **Acute, Right, Obtuse, Straight**
Explanation: From smallest to largest: Acute (less than 90°), Right (90°),

Obtuse (90° to 180°), Straight (180°).

13. Answer: Angle **Y** is larger.
Explanation: Angle X is acute (approximately 45°), while Angle Y is obtuse (approximately 120°), making Y larger.

14. Answer: **True**
Explanation: A straight angle measures 180 degrees, while a reflex angle measures between 180 and 360 degrees, making it larger.

15. Answer: **Acute**
Explanation: 85 degrees is less than 90 degrees (a right angle), so it is an acute angle.

16. Answer: **Obtuse**
Explanation: 95 degrees is greater than 90 degrees but less than 180 degrees, so it is an obtuse angle.

Section 3: Challenge — Real-world Turns

Detailed worked solutions

17. Answer: **90 degrees** (or a right angle)
Working: At 3:00, the minute hand points to 12 and the hour hand points to 3. This forms a quarter turn, which equals 90 degrees.

18. Answer: **180 degrees** (or a straight angle)
Working: At 6:00, the minute hand points to 12 and the hour hand points to 6. They are opposite each other, forming a straight line, which is 180 degrees.

19. Answer: **A quarter turn** (or 90-degree turn, or right-angle turn)
Explanation: From North to East is a 90-degree turn clockwise, which is one-quarter of a full turn.

20. Answer: **180 degrees**
Working: From South to North is exactly opposite directions, which is a half

turn or 180 degrees.

21. Answer: **180 degrees** (or straight angle)
Explanation: When a door opens to form a straight line with the wall, it has turned through 180 degrees (a straight angle).

22. Answer: **360 degrees**
Explanation: One complete revolution (full turn) equals 360 degrees.

23. Answer: **A right angle** (or 90-degree turn, or quarter turn)
Explanation: From North to West is a 90-degree turn to the left, which is a right angle or quarter turn.

Outstanding Achievement!

You have mastered understanding angles as turns, comparing angle sizes, and applying angle knowledge to real-world situations. You can now identify angles as fractions of a full turn and recognize how angles relate to everyday movements like clock hands, compass directions, and turning objects. Excellent work!

