

Lines and Angles

Unit: Basic Geometry - Student Practice Worksheet

Overview: Ms. Rao handed Kabir and Anaya two wooden strips joined by a pin at one end, and told them to make every angle they could think of before the bell rang. No protractor. Just two strips of wood and a shared pin. By the end of the lesson they had built a right angle, a straight line, and a full turn — all from the same two sticks.

Practice Questions (30 Total)

Section A - Easy

Q1. The teal arms make a square corner. How many degrees is that?



- ☐ A. 45
- ☐ B. 90
- ☐ C. 180
- ☐ D. 360

Q2. What is the shared point where two arms of an angle meet called?

- ☐ A. The vertex
- ☐ B. The ray
- ☐ C. The segment
- ☐ D. The degree

Q3. An angle smaller than 90 degrees is called what?

- ☐ A. Obtuse
- ☐ B. Reflex
- ☐ C. Acute
- ☐ D. Straight

Q4. The arms lie on one maroon-pinned line. How many degrees is a straight angle?



flat opening, two arms

- ☐ A. 180
- ☐ B. 90
- ☐ C. 270
- ☐ D. 360

Q5. An angle between 90 and 180 degrees is called what?

- ☐ A. Acute
- ☐ B. Right
- ☐ C. Reflex
- ☐ D. Obtuse

Q6. What do we call the two lines forming an angle?

- ☐ A. Vertices
- ☐ B. Arms
- ☐ C. Rays only
- ☐ D. Degrees

Q7. Maroon start, teal arrow forever. Which figure has exactly one endpoint?



one endpoint

- ☐ A. A line
- ☐ B. A line segment
- ☐ C. An angle
- ☐ D. A ray

Q8. How many degrees is a full turn?

- ☐ A. 90
- ☐ B. 180
- ☐ C. 360
- ☐ D. 270

Q9. Which of these has exactly TWO endpoints?

- ☐ A. A line segment
- ☐ B. A line
- ☐ C. A ray
- ☐ D. A full turn

Q10. Kabir's strips match a book corner. Name the angle type and its degrees.

- ☐ A. Acute
- ☐ B. Right
- ☐ C. Obtuse
- ☐ D. Straight

Section B - Medium

Q11. The teal opening is marked 45° . What type of angle is it?



- ☐ A. Acute
- ☐ B. Right
- ☐ C. Obtuse
- ☐ D. Reflex

Q12. Anaya says a straight angle looks like it has no angle at all, just a flat line. Is she describing it correctly?

- ☐ A. No, a straight angle is actually a right angle
- ☐ B. No, flat lines have no measurable angle
- ☐ C. Yes, but it should be called a zero-degree angle
- ☐ D. Yes — it genuinely measures 180° , even though it looks flat

Q13. An angle measures 135° . What type of angle is it?

- ☐ A. Acute
- ☐ B. Obtuse
- ☐ C. Right

☐ D. Straight

Q14. Two square corners sit arm-to-arm on a line. What total angle is that?



☐ A. An acute angle

☐ B. A reflex angle

☐ C. Still just a right angle

☐ D. A straight angle

Q15. Which pair of angle types together could add up to exactly 180° ?

☐ A. An acute and an obtuse angle

☐ B. Two obtuse angles

☐ C. Two straight angles

☐ D. A right angle and a reflex angle

Q16. An angle measures 270° . What type of angle is it?

☐ A. Obtuse

☐ B. Straight

☐ C. Reflex

☐ D. Acute

Q17. Clock hands at 3:00, one vertical and one horizontal. What type of angle?



☐ A. Acute

☐ B. Right

☐ C. Obtuse

☐ D. Reflex

Q18. Which of these correctly orders angle types from smallest to largest measure?

☐ A. Acute, right, obtuse, straight, reflex

- ☐ B. Reflex, straight, obtuse, right, acute
- ☐ C. Right, acute, straight, obtuse, reflex
- ☐ D. Obtuse, acute, right, reflex, straight

Q19. A ray starts at point A and passes through point B, continuing forever. Which point is its endpoint?

- ☐ A. Point B
- ☐ B. Point A
- ☐ C. Both A and B
- ☐ D. Neither — rays have no endpoint

Q20. How many right angles fill a full turn, and why $4 \times 90 = 360$?

- ☐ A. 2
- ☐ B. 3
- ☐ C. 4
- ☐ D. 6

Section C - Challenge

Q21. Square corner 90° , maroon arc the long way around. What is the reflex measure?



- ☐ A. 90°
- ☐ B. 180°
- ☐ C. 360°
- ☐ D. 270°

Q22. Two angles are supplementary, meaning they add up to 180° . One of them is obtuse. What must the other angle be?

- ☐ A. Acute
- ☐ B. Also obtuse
- ☐ C. Right
- ☐ D. Reflex

Q23. Three angles around a single point (not on a straight line) add up to 360° . Two of them measure 110° and 140° . What is the third?

- ☐ A. 120°
- ☐ B. 110°
- ☐ C. 100°
- ☐ D. 130°

Q24. A straight line cut by another; one angle is 70° . What are the other three?



- ☐ A. $70^\circ, 70^\circ, 70^\circ$
- ☐ B. $90^\circ, 90^\circ, 110^\circ$
- ☐ C. $130^\circ, 70^\circ, 130^\circ$
- ☐ D. $110^\circ, 70^\circ, 110^\circ$

Q25. Two angles are complementary, meaning they add up to 90° . Can either of them be a right angle?

- ☐ A. Yes, both can be right angles
- ☐ B. No — a right angle alone already equals 90° , leaving nothing for the other
- ☐ C. Yes, one can be right if the other is obtuse
- ☐ D. Only if both angles are equal

Q26. An angle and its reflex counterpart (measured the 'long way around') always add up to what?

- ☐ A. 180°
- ☐ B. 90°
- ☐ C. 360°
- ☐ D. 270°

Q27. Clock hands opposite at 6:00. What type of angle?



- ☐ A. Right
- ☐ B. Straight
- ☐ C. Acute
- ☐ D. Reflex

Q28. Anaya says every reflex angle has a 'twin' angle that is NOT reflex, both sharing the same two arms and vertex. Is this true?

- ☐ A. False — reflex angles have no twin
- ☐ B. True, but only for right angles
- ☐ C. True — the reflex measure and its non-reflex twin always sum to 360°
- ☐ D. False — the twin would also always be reflex

Q29. Kabir claims an obtuse angle plus an acute angle must always equal exactly 180° . Is this always true?

- ☐ A. False, it depends on the exact measures
- ☐ B. True, always
- ☐ C. True, but only for right angles
- ☐ D. False — the total is always 360°

Q30. Folding the strips until the arms overlap: what original angle, and why 180° ?

- ☐ A. It must have been a straight angle (180°)
- ☐ B. It must have been a right angle
- ☐ C. It could have been any angle at all
- ☐ D. It must have been a reflex angle

Answer Key

Q1: (B) (b) 90. A right angle is exactly 90 degrees, like the corner of a book or a piece of paper.

Q2: (A) (a) The vertex. This is the fixed point both arms of the angle share, like the pin in the wooden-strip model.

Q3: (C) (c) Acute. Any angle measuring less than 90 degrees is called an acute angle.

Q4: (A) (a) 180. A straight angle looks like a flat line, with the two arms pointing in exactly opposite directions.

Q5: (D) (d) Obtuse. This range, bigger than a right angle but less than a straight line, defines an obtuse angle.

Q6: (B) (b) Arms. Each of the two lines meeting at the vertex is called an arm of the angle.

Q7: (D) (d) A ray. A ray starts at one endpoint and extends forever in a single direction, unlike a line (no endpoints) or a segment (two endpoints).

Q8: (C) (c) 360. A full turn returns all the way around to the starting position, measuring 360 degrees.

Q9: (A) (a) A line segment. A line segment has two definite endpoints, unlike a line (which never ends) or a ray (which has only one).

Q10: (B) (b) Right. The corner of a book is a right angle, exactly 90 degrees, matching what Kabir built.

Q11: (A) (a) Acute. Since 45° is less than 90° , it falls into the acute angle category.

Q12: (D) (d) Yes — it genuinely measures 180° , even though it looks flat. A straight angle is still a real, measurable angle of exactly 180° , formed by two arms pointing in exactly opposite directions.

Q13: (B) (b) Obtuse. 135° is greater than 90° but less than 180° , exactly the range that defines an obtuse angle.

Q14: (D) (d) A straight angle. $90^\circ + 90^\circ = 180^\circ$, exactly the measure of a straight angle.

Q15: (A) (a) An acute and an obtuse angle. For example 60° (acute) + 120° (obtuse) = 180° — two obtuse angles would always exceed 180° together.

Q16: (C) (c) Reflex. A reflex angle measures more than 180° but less than 360° , and 270° fits squarely in that range.

Q17: (B) (b) Right. At 3:00, the hour and minute hands form exactly a 90° angle, a right angle.

Q18: (A) (a) Acute, right, obtuse, straight, reflex. This lists the five named angle types in strictly increasing order of their measure.

Q19: (B) (b) Point A. A ray's endpoint is where it starts; it then extends forever in one direction through and beyond B.

Q20: (C) (c) 4. A full turn is 360° , and $360/90=4$, so exactly four right angles fit into a full turn.

Q21: (D) (d) 270° . Since a full turn is 360° and the given angle is 90° , the reflex counterpart is $360-90=270^\circ$.

Q22: (A) (a) Acute. Since the obtuse angle already exceeds 90° , the remaining amount needed to reach 180° must be less than 90° , making the other angle acute.

Q23: (B) (b) 110° . Since $110+140+x=360$, solving gives $x=110$ — angles fully surrounding a point must always sum to 360° .

Q24: (D) (d) 110° , 70° , 110° . Angles across from each other (vertically opposite) are equal, and adjacent angles on a straight line sum to 180° , so 70° pairs with another 70° opposite it, and both remaining angles are $180-70=110^\circ$ each.

Q25: (B) (b) No — a right angle alone already equals 90° , leaving nothing for the other. Two complementary angles must each be less than 90° (acute), since a right angle by itself already uses up the full 90° total.

Q26: (C) (c) 360° . Any angle and the remaining amount needed to complete a full turn (its reflex counterpart) always sum to exactly 360° .

Q27: (B) (b) Straight. At 6:00, the hour hand points to 6 and the minute hand points to 12, exactly opposite directions, forming a straight 180° angle.

Q28: (C) (c) True — the reflex measure and its non-reflex twin always sum to 360° . Any pair of arms meeting at a vertex actually creates two angles at once, measured on either side, and these two measures always add to a full turn.

Q29: (A) (a) False — it depends on the specific measures; there's no guaranteed total unless stated as supplementary. An obtuse angle of 100° and an acute angle of 20° add to only 120° , not 180° — the earlier supplementary example was a specific case, not a universal rule for any obtuse-plus-acute pair.

Q30: (A) (a) It must have been a straight angle (180°). Only a straight angle's two arms point in exactly opposite directions such that folding it in half makes both arms align on top of each other.

You've got this! Keep learning and shining! - Ruchi Math Coaching