

Lines, Line Segments, Rays and Angles

Unit: Geometry - Student Practice Worksheet

Overview: Kabir drew a line from one edge of his notebook to the other and called it finished. Anaya drew the exact same mark and called it unfinished — because a real line never stops. Ms. Rao said they were both right, about two different things.

Practice Questions (30 Total)

Section A - Easy

Q1. Mark with arrows both ways. What is it?



- ☐ A. A line
- ☐ B. A line segment
- ☐ C. A ray
- ☐ D. A vertex

Q2. What do we call the shared endpoint where two rays meet to form an angle?

- ☐ A. The base
- ☐ B. The vertex
- ☐ C. The segment
- ☐ D. The edge

Q3. How many endpoints does a line segment have?

- ☐ A. 0
- ☐ B. 2
- ☐ C. 1
- ☐ D. Infinite

Q4. Dot at one end, arrow the other way. What is it?



- ☐ A. 2
- ☐ B. 0
- ☐ C. 1
- ☐ D. 3

Q5. A right angle measures exactly how many degrees?

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

Q6. An angle smaller than 90° is called:

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

Q7. Two rays making a flat line. Degree measure?



- ☐ A. 180
- ☐ B. 90
- ☐ C. 45
- ☐ D. 270

Q8. An angle wider than 90° but less than 180° is called:

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

Q9. Which everyday object is a good model of a ray?

- ☐ A. A torch beam
- ☐ B. A rubber band
- ☐ C. A closed loop of string
- ☐ D. A ruler edge (fixed both ends)

Q10. Can you measure the exact length of a full line?

- ☐ A. Yes, with a long ruler
- ☐ B. No, because it has no endpoints
- ☐ C. Yes, it is always 180 units
- ☐ D. Only if it is horizontal

Section B - Medium

Q11. Clock hands at 3. What angle type?



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

Q12. Your notebook page's edge, from one corner to the other, is best described as a:

- ☐ A. Line
- ☐ B. Ray
- ☐ C. Line segment
- ☐ D. Vertex

Q13. An angle measuring 95° is:

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

Q14. Clock hands at 6. What angle type?



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

Q15. An angle measuring 45° is:

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

Q16. A carpenter checks a table corner with a folded-paper right-angle tester and it fits exactly. What can she conclude?

- ☐ A. The corner is acute
- ☐ B. The corner is obtuse
- ☐ C. The corner is a full circle
- ☐ D. The corner is exactly 90°

Q17. Clock hands at 10:10. What angle type?



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

Q18. Why can you never actually draw a complete line on paper?

- ☐ A. A line has no endpoints and goes on forever
- ☐ B. Pencils are too thick

- ☐ C. Paper is always square
- ☐ D. Lines must be curved

Q19. Two rays share a vertex but point in exactly opposite directions. What angle do they form?

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

Q20. A ray starts at point A and passes through point B, continuing forever. Which point is the endpoint?

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

Section C - Challenge

Q21. Two angles make a straight line; one is 120. Other?



- ☐ A. 60°
- ☐ B. 120°
- ☐ C. 180°
- ☐ D. 90°

Q22. Kabir says: 'Every line segment can be extended into a full line.' Is he right?

- ☐ A. No — segments can never become lines
- ☐ B. Yes — just remove the endpoints and let it continue forever both ways
- ☐ C. Only if the segment is horizontal
- ☐ D. Only if the segment is exactly 1 unit long

Q23. Two angles side by side share a ray and together form a right angle. One is 35° . What is the other?

- ☐ A. 45°
- ☐ B. 55°
- ☐ C. 65°
- ☐ D. 125°

Q24. Rectangle corners. How many right angles?



four square corners

- ☐ A. 2
- ☐ B. 3
- ☐ C. 0
- ☐ D. 4

Q25. If you rotate a ray a full turn back to where it started, how many degrees have you turned through?

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

Q26. Ms. Rao says an angle is 'reflex' when it is greater than 180° but less than 360° . Which of these is a reflex angle?

- ☐ A. 170°
- ☐ B. 90°
- ☐ C. 250°
- ☐ D. 45°

Q27. A right angle is doubled. What type results?



90 doubled



- ☐ A. Acute
- ☐ B. Right

- ☐ C. Obtuse
- ☐ D. Straight

Q28. Which statement is FALSE?

- ☐ A. A ray can be measured with a ruler because it has a fixed length
- ☐ B. A line has no endpoints
- ☐ C. A ray has exactly one endpoint
- ☐ D. A line segment can be measured with a ruler

Q29. Which pair correctly matches shape to angle type: a fully open book lying flat, and a book opened just a crack?

- ☐ A. Flat book = acute; cracked book = obtuse
- ☐ B. Flat book = right; cracked book = straight
- ☐ C. Flat book = straight; cracked book = acute
- ☐ D. Both angles are obtuse in this example

Q30. Ms. Rao's page-corner test correctly sorts an angle as acute, right or obtuse. Why does this simple test work?

- ☐ A. Because paper corners change size depending on the paper
- ☐ B. Because paper is always exactly 90° at every corner, giving a fixed 90° reference to compare against
- ☐ C. It only works for angles bigger than 180°
- ☐ D. It measures degrees exactly, the same as a protractor

Answer Key

Q1: (A) (a) A line. It has no endpoints at all.

Q2: (B) (b) The vertex.

Q3: (B) (b) 2. Both ends are fixed points.

Q4: (C) (c) 1. It starts at one fixed point and goes on forever the other way.

Q5: (D) (d) 90 degrees, like the corner of a square.

Q6: (C) (c) Acute — sharp and narrow, like a pizza slice tip.

Q7: (A) (a) 180 degrees. It opens all the way into a straight line.

Q8: (D) (d) Obtuse.

Q9: (A) (a) A torch beam — fixed at the torch, travelling outward forever.

Q10: (B) (b) No — a line never ends, so it has no fixed length to measure.

Q11: (A) (a) Right. At 3 o'clock the hour and minute hands form exactly 90° .

Q12: (C) (c) Line segment — the page has two fixed corners as endpoints.

Q13: (D) (d) Obtuse — just over 90° .

Q14: (B) (b) Straight — the two hands point in exactly opposite directions, 180° .

Q15: (A) (a) Acute — less than 90° .

Q16: (D) (d) The corner is exactly 90° — a right angle.

Q17: (C) (c) Obtuse. At 10:10 the hour hand has moved past 10, so the smaller angle between the hands is about 115, which is greater than 90.

Q18: (A) (a) A line has no endpoints and goes on forever — paper is always finite.

Q19: (C) (c) Straight — opposite rays from one vertex form a 180° straight angle.

Q20: (B) (b) A — the ray is named starting from its fixed endpoint.

Q21: (A) (a) 60° . Together they must total 180° , so $180 - 120 = 60$.

Q22: (B) (b) Yes — extending a segment's endpoints outward forever in both directions gives a line.

Q23: (B) (b) 55° . Together they total 90° , so $90 - 35 = 55$.

Q24: (D) (d) 4. Every corner of a rectangle is exactly 90° .

Q25: (A) (a) 360° . A full turn always measures 360° .

Q26: (C) (c) 250° . It is more than 180° but less than a full 360° turn.

Q27: (D) (d) Straight. $90^\circ \times 2 = 180^\circ$, exactly a straight angle.

Q28: (A) (a) False — a ray has no fixed length since it goes on forever in one direction; only segments have a measurable length.

Q29: (C) (c) A book lying fully flat forms a straight 180° angle; barely cracked open is a small acute angle.

Q30: (B) (b) A page corner is always a true 90° right angle, so comparing against it reliably shows narrower (acute), matching (right), or wider (obtuse).

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