Angles: 10 practice questions

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Name: _____ Date: _____

Attempt all questions and show your working. Suggested time: 15 to 20 minutes.

Section A: Consolidating (Questions 1-4)

Question 1

Two angles sit side by side on a straight line. One of them is 65°. Find the other angle.

Question 2

Two straight lines cross. One of the four angles formed is 48°. What is the size of the angle vertically opposite it?

Question 3

Two parallel lines are crossed by a transversal. Fill in the gaps.

(a) Corresponding angles are _____.

(b) Alternate angles are _____.

(c) Co-interior angles add up to _____.

Question 4

Two parallel lines are crossed by a transversal. One of a pair of co-interior angles is 70°. Find the other angle.

Section B: Standard (Questions 5-10)

Question 5

Two parallel lines run across the page from left to right, one above the other. A slanted straight line (a transversal) crosses both of them. At the top crossing, the four angles are named: a (above the line, left of the transversal), b (above, right), c (below, left) and d (below, right). At the bottom crossing they are named the same way: e (above, left), f (above, right), g (below, left) and h (below, right).

Using this layout, name the angle that is:

(a) corresponding to c

(b) alternate to d

(c) co-interior with d

Question 6

Use the eight-angle layout from Question 5. If a = 120°, find the sizes of b, c, d, e, f, g and h.

Question 7

Use the eight-angle layout from Question 5. For each pair, write whether the angles are corresponding, alternate, co-interior or vertically opposite.

(a) b and f

(b) c and f

(c) d and f

(d) a and d

Question 8

Use the eight-angle layout from Question 5. If f = 72°, find each angle and give a reason.

(a) c

(b) e

Question 9

Two lines are crossed by a transversal. A pair of corresponding angles measure 68° and 70°. Are the two lines parallel? Explain.

Question 10

Two lines are crossed by a transversal. A pair of co-interior angles measure 95° and 85°. Are the two lines parallel? Explain.

Angles: answers

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Question 1

Answer: 115° (angles on a straight line add to 180°)

Question 2

Answer: 48°

Question 3

Answer: (a) equal (b) equal (c) 180°

Question 4

Answer: 110°

Question 5

Answer: (a) g (b) e (c) f

Question 6

Answer: b = 60°, c = 60°, d = 120°, e = 120°, f = 60°, g = 60°, h = 120°

Question 7

Answer: (a) corresponding (b) alternate (c) co-interior (d) vertically opposite

Question 8

Answer: (a) c = 72° (alternate angles, parallel lines) (b) e = 108° (co-interior with c, or on a straight line with f)

Question 9

Answer: No. If the lines were parallel, corresponding angles would be equal, but 68° ≠ 70°.

Question 10

Answer: Yes. Co-interior angles add to 180° (95 + 85 = 180), which only happens when the lines are parallel.