

Adjacent Angles: Mixed Practice

Grade 5 • Identify, add, subtract, and reason

Name: _____ Date: _____

Directions: Answer each question. Use the diagram to help you, and show your calculation where there is one.

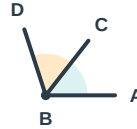
1.



Are two angles adjacent if they share a vertex and one side but do not overlap?

Answer: _____

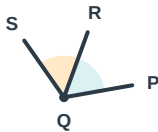
2.



What is the common vertex of $\angle ABC$ and $\angle CBD$?

Answer: _____

3.



What is the common side of $\angle PQR$ and $\angle RQS$?

Answer: _____

4.



Two adjacent angles are 32° and 48° . Find the whole angle.

Answer: _____

5.



A 115° angle is split into parts of 70° and x° . Find x .

Answer: _____

6.



One angle on a straight line is 39° . Find the other.

Answer: _____

7.



A whole angle is 140° . One part is 86° . Find the other.

Answer: _____

8.



Two adjacent angles measure 24° and 66° . Find the whole angle.

Answer: _____

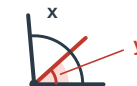
9.



Angles on a straight line add to what measure?

Answer: _____

10.



Can overlapping angles be adjacent?

Answer: _____

11.



A whole angle is 105° . One part is 47° . Find the other.

Answer: _____

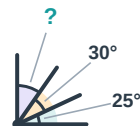
12.



One angle on a straight line is 127° . Find the other.

Answer: _____

13.



Three adjacent angles make 90° . Two are 25° and 30° . Find the third.

Answer: _____

14.



A 160° angle is split into 72° and x° . Find x .

Answer: _____

15.

State one feature adjacent angles must share.

Answer: _____

Answer Key

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Answers

1. **Yes**

2. **B**

3. **QR**

4. **80°**

$$32^\circ + 48^\circ = 80^\circ$$

5. **45°**

$$115^\circ - 70^\circ = 45^\circ$$

6. **141°**

$$180^\circ - 39^\circ = 141^\circ$$

7. **54°**

$$140^\circ - 86^\circ = 54^\circ$$

8. **90°**

$$24^\circ + 66^\circ = 90^\circ$$

9. **180°**

10. **No**

11. **58°**

$$105^\circ - 47^\circ = 58^\circ$$

12. **53°**

$$180^\circ - 127^\circ = 53^\circ$$

13. **35°**

$$90^\circ - 25^\circ - 30^\circ = 35^\circ$$

14. **88°**

$$160^\circ - 72^\circ = 88^\circ$$

15. **a common vertex and one common side**

Marking note

Question 3 may be written QR or RQ, and "ray QR" is also correct — what matters is that the student names the two letters the angle names share apart from the vertex.

Question 15 accepts either feature on its own: a common vertex, or a common side. A student who writes both has given more than the question asked for, not less.

Questions 1 and 10 are the pair worth reading together. Sharing a vertex and a side makes angles adjacent only while their interiors stay apart, so 10 is No for exactly the reason 1 is Yes.