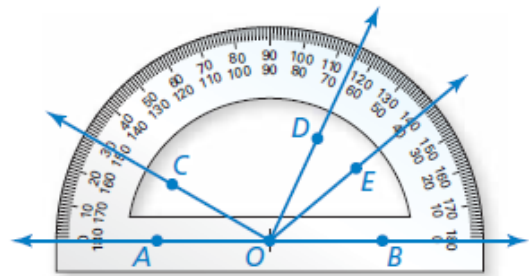# Angle Measures and Angle Bisectors

Practice and Problem Solving: A/B
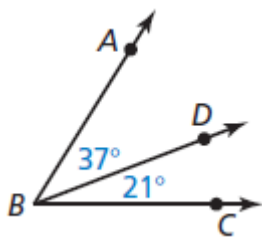
In Exercises 1 −4, find the angle measure. Then classify the angle as acute, obtuse, right, or straight.

1. $m\angle AOC$
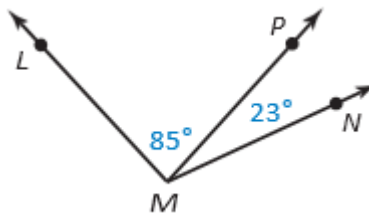
2. $m\angle BOD$

3. $m\angle COD$

4. $m\angle EOD$
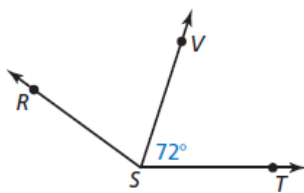
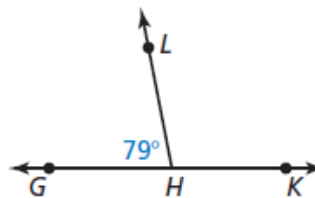**In Exercises 5 − 8, find the indicated angle measure.**

5. Find $m\angle ABC$

6. Find $m\angle LMN$
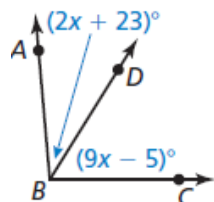
7. $m\angle RST = 114°$. Find $m\angle RSV.$
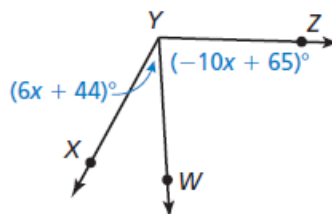
8. $\angle GHK$ is a straight angle. Find $m\angle LHK$

In Exercises 9 − 14, find the indicated angle measures.
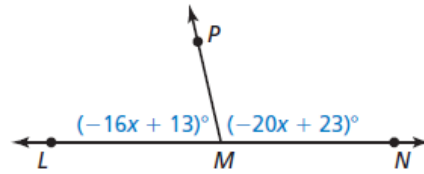
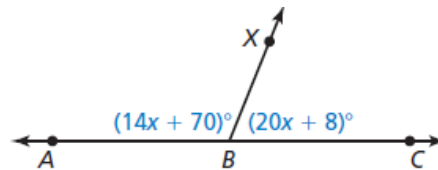9. $m\angle ABC = 95°$. Find $m\angle ABD$ and $m\angle DBC.$

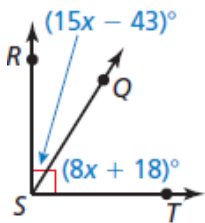10. $m\angle XYZ = 117°$. Find $m\angle XYW$ and $m\angle WYZ.$

11. ∠*LMN* is a straight angle. Find *m*∠*LMP* and *m*∠*NMP*.

$(-16x + 13)°$ $(-20x + 23)°$

12. ∠*ABC* is a straight angle. Find *m*∠*ABX* and *m*∠*CBX*.

$(14x + 70)°$ $(20x + 8)°$

13. Find *m*∠*RSQ* and *m*∠*TSQ*.

$(15x - 43)°$

$(8x + 18)°$

14. Find *m*∠*DEH* and *m*∠*FEH*.

$(10x + 21)°$ *F*

$13x°$
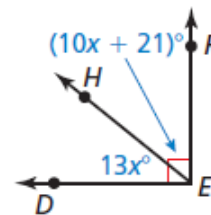
In Exercises 15 – 18, $\overline{QS}$ bisects ∠*PQR*. Use the diagram and the given angle measure to find the indicated angle measures.

15. *m*∠*PQS* = 63°. Find *m*∠*RQS* and *m*∠*PQR*.
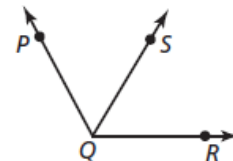
16. *m*∠*RQS* = 71°. Find *m*∠*PQS* and *m*∠*PQR*.

17. *m*∠*PQR* = 124°. Find *m*∠*PQS* and *m*∠*RQS*.

18. *m*∠*PQR* = 119°. Find *m*∠*PQS* and *m*∠*RQS*.

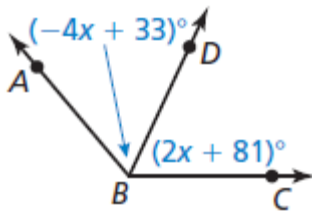**In Exercises 19– 22, $\overline{BD}$ bisects $\angle ABC$. Find $m\angle ABD$, $m\angle CBD$, and $m\angle ABC$.**

19.

A $(6x + 14)°$

D

$(3x + 29)°$

B C

20.

A

$(3x + 6)°$

D

B $(7x - 18)°$ C

21.

$(-4x + 33)°$ D

A

$(2x + 81)°$

B C

22.

$(8x + 35)°$ D

A

$(11x + 23)°$

B C