MP 4 warm up 1 on Angles
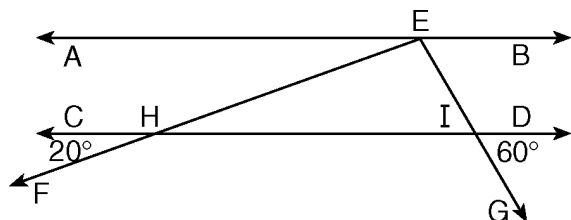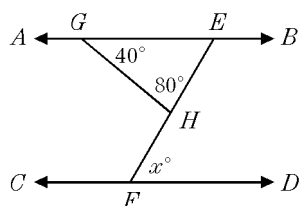
Name: _____   **Date:** _____

1. In the accompanying diagram, $\overleftrightarrow{AB}\|\overleftrightarrow{CD}$. From point E on $\overleftrightarrow{AB}$ transversals $\overrightarrow{EF}$ and $\overrightarrow{EG}$ are drawn, intersecting $\overleftrightarrow{CD}$ at H and I, respectively.

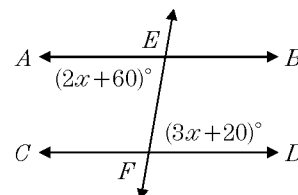If $m\angle CHF = 20$ and $m\angle DIG = 60$, what is $m\angle HEI$?

A. 60°   B. 80°   C. 100°   D. 120°

2. In the accompanying diagram, $\overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$, $\overline{EF}$ intersects $\overleftrightarrow{AB}$ at E and $\overleftrightarrow{CD}$ at F, and $\overline{GH}$ intersects $\overleftrightarrow{AB}$ at G and $\overline{EF}$ at H. If $m\angle EGH = 40$, $m\angle GHE = 80$, and $m\angle EFD = x$, what is the value of x?
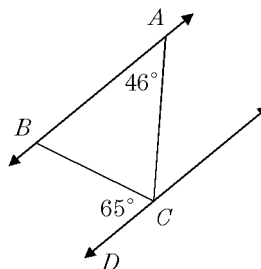

3. In the accompanying diagram, $\overleftrightarrow{AB}$ is parallel to $\overleftrightarrow{CD}$, and $\overrightarrow{EF}$ is a transversal. If $m\angle BEF = 2x + 60$ and $m\angle DFE = 3x + 20$, what is $m\angle BEF$?
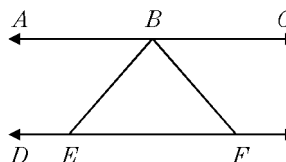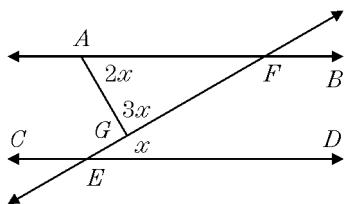
A. 100   B. 20

C. 140   D. 40

4. In the accompanying diagram, $\overleftrightarrow{AB}$ is a parallel to $\overleftrightarrow{CD}$, $m\angle BAC = 46$, and $m\angle BCD = 65$. Find the measure of $\angle ACB$.
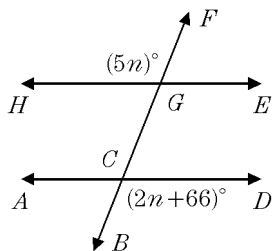

5. In the accompanying diagram, $\overline{ABC} \parallel \overline{DEF}$ and $\overline{BE} \cong \overline{BF}$. If $m\angle CBF = 40$, find $m\angle BED$.
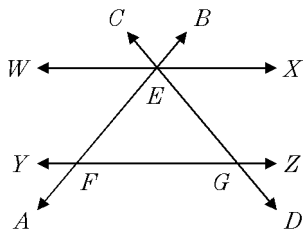
6. In the accompanying figure, $\overleftrightarrow{EGF}$ intersects $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$, and $\overline{AG}$ is drawn. If $\overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$, $m\angle FED = x$, $m\angle GAF = 2x$, and $m\angle FGA = 3x$, find x.
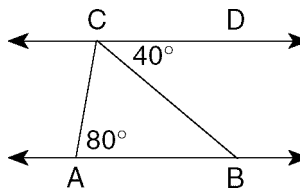

7. In the accompanying diagram, parallel lines $\overleftrightarrow{HE}$ and $\overleftrightarrow{AD}$ are cut by transversal $\overleftrightarrow{BF}$ at points G and C, respectively. If $m\angle HGF = 5n$ and $m\angle BCD = 2n + 66$, find n.

8. In the accompanying figure, $\overleftrightarrow{WX} \parallel \overleftrightarrow{YZ}$; $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$ intersect $\overleftrightarrow{WX}$ at E and $\overleftrightarrow{YZ}$ at F and G, respectively. If $m\angle CEW = m\angle BEX = 50$, find $m\angle EGF$.
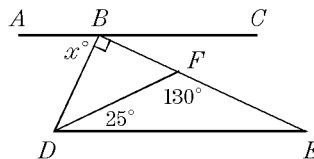

9. In the accompanying diagram, $\overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$, $m\angle CAB = 80$, and $m\angle DCB = 40$.
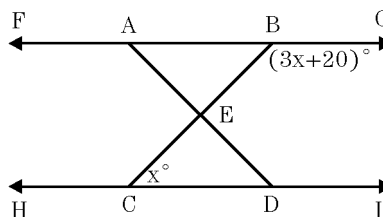

What is $m\angle ACB$?
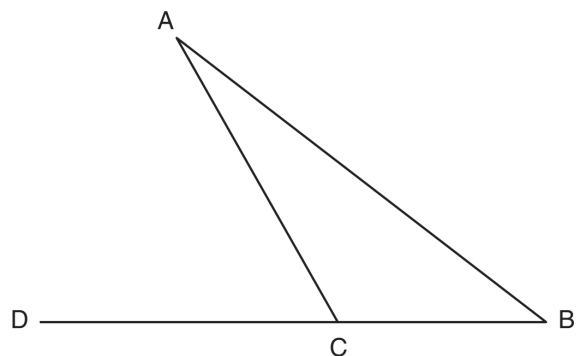
A. 40   B. 60   C. 80   D. 120

10. In the accompanying diagram, $\overline{ABC} \parallel \overline{DE}$, $m\angle FDE = 25$, $m\angle DFE = 130$, and $m\angle ABD = x$. What is the value of x?

11. In the accompanying diagram, $\overleftrightarrow{FABG} \parallel \overleftrightarrow{HCDI}$, $\overline{BC}$ and $\overline{AD}$ intersect at E, $m\angle GBE = 3x + 20$, and $m\angle ECD = x$. What is the value of x?

12. In the diagram below of $\triangle ABC$, side $\overline{BC}$ is extended to point D, $m\angle A = x$, $m\angle B = 2x + 15$, and $m\angle ACD = 5x + 5$.
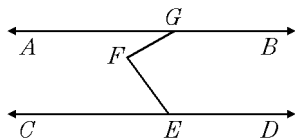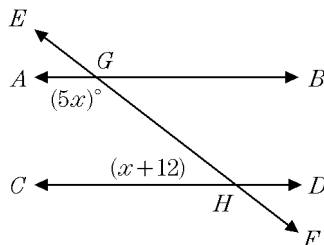
A

D ——————— C —————— B

What is $m\angle B$?

A. 5   B. 20   C. 25   D. 55

13. In the accompanying diagram, $\overleftrightarrow{AGB} \parallel \overleftrightarrow{CED}$, $m\angle AGF = 30$, and $m\angle CEF = 45$. What is $m\angle GFE$?
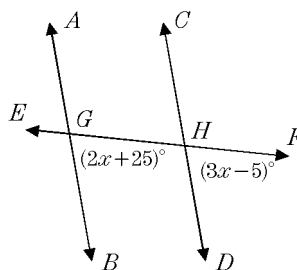
A. 45   B. 52
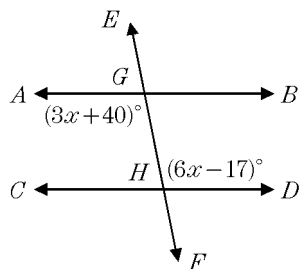
C. 60   D. 75

G
A   F   B
C   E   D

14. In the accompanying diagram, parallel lines $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$ are intersected by $\overleftrightarrow{EF}$ at G and H, respectively. If $m\angle AGH = 5x$ and $m\angle CHG = x + 12$, find the value of x.

E
A   G   B
    $(5x)°$
C $(x+12)$ D
        H
            F

15. In the accompanying diagram, parallel lines $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$ are intersected by transversal $\overleftrightarrow{EF}$ at points G and H, respectively. If $m\angle FGB = 2x + 25$ and $m\angle FHD = 3x - 5$, find x.

A   C
E   G   H   F
    $(2x+25)°$ $(3x-5)°$
    B   D

16. In the accompanying diagram, transversal $\overleftrightarrow{EF}$ intersects parallel lines $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$ at G and H, respectively. If $m\angle AGH = 3x + 40$, and $m\angle GHD = 6x - 17$, what is the value of x?
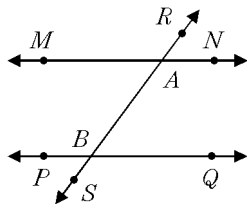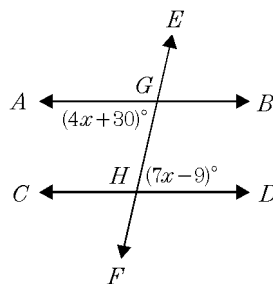

18. In the accompanying diagram, parallel lines $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$ are intersected by transversal $\overleftrightarrow{EF}$ at G and H, respectively. If $m\angle AGH = 4x + 30$ and $m\angle GHD = 7x - 9$, what is the value of x?
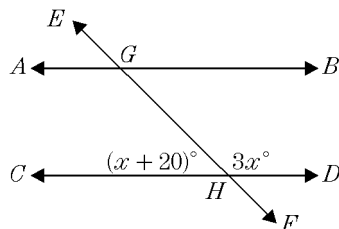

17. In the accompanying diagram, transversal $\overleftrightarrow{RS}$ intersects parallel lines $\overleftrightarrow{MN}$ and $\overleftrightarrow{PQ}$ at A and B, respectively. If $m\angle RAN = 3x + 24$ and $m\angle RBQ = 7x - 16$, find the value of x.
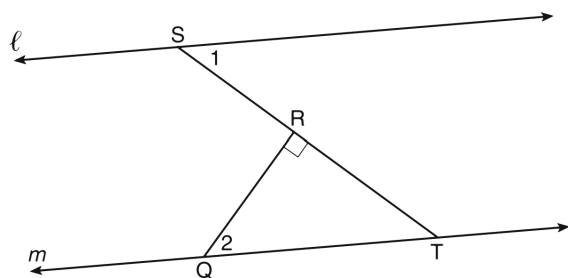

19. In the accompanying diagram, parallel lines $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$ are intersected by transversal $\overleftrightarrow{EF}$ at G and H respectively. If $m\angle CHG = x + 20$ and $m\angle DHG = 3x$, find the value of x.
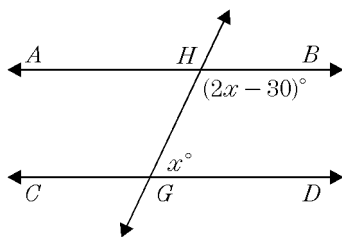
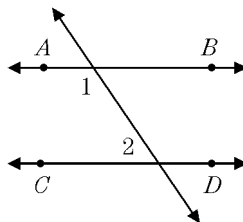20. In the diagram below, $\ell \parallel m$ and $\overline{QR} \perp \overline{ST}$ at R.

If $m\angle 1 = 63$, find $m\angle 2$.

22. In the accompanying diagram, $\overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$. If $m\angle 1 = 4x - 10$ and $m\angle 2 = 2x - 20$, find x.

21. In the accompanying diagram, transversal $\overleftrightarrow{GH}$ intersects parallel lines $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$, $m\angle DGH = x$, and $m\angle BHG = 2x - 30$. Find the value of x.

23. In $\triangle ABC$, $m\angle A = 3x + 1$, $m\angle B = 4x - 17$, and $m\angle C = 5x - 20$. Which type of triangle is $\triangle ABC$?

A.   right   B.   scalene

C.   isosceles   D.   equilateral

MP 4 warm up 1 on Angles   4/13/2018

1.
Answer: C

2.
Answer: 60

3.
Answer: A

4.
Answer: 69

5.
Answer: 140

6.
Answer: 30

7.
Answer: 22

8.
Answer: 50

9.
Answer: B

10.
Answer: 65

11.
Answer: 40

12.
Answer: C

13.
Answer: D

14.
Answer: 28

15.
Answer: 30

16.
Answer: 19

17.
Answer: 10

18.
Answer: 13

19.
Answer: 40

20.
Answer: 27

21.
Answer: 70

22.
Answer: 35

23.
Answer: C