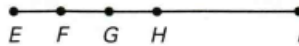


Cumulative Review

For use after Chapters 1–3

In the diagram of collinear points, $EH = HI$, $EF = FG = GH$. If $GH = 4$, find each length. (1.3)

1. EG
2. HI
3. GI
4. EI



Find the coordinates of B if M is the midpoint of \overline{AB} . (1.5)

5. $A(7, 5), M(9, 7)$
6. $A(-3, 5), M(1, 9)$

Write the (a) inverse and (b) converse of the statement. (2.2)

7. If an angle measures 120° , then it is an obtuse angle.
8. If an angle measures 90° , then it is not an acute angle.

Using p and q , write the symbolic statement in words. (2.3)

p : It is raining. q : The sun is not shining.

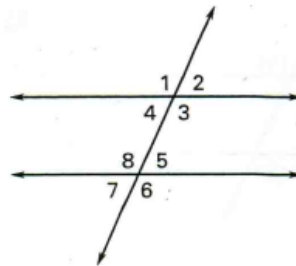
9. $q \rightarrow p$
10. $\sim p \rightarrow \sim q$

Solve the equation and write a reason for each step. (2.4)

11. $3x - 15 = 45$
12. $2(z + 5) = 26$

Complete the statement with *corresponding*, *alternate interior*, *alternate exterior*, or *consecutive interior*. (3.1)

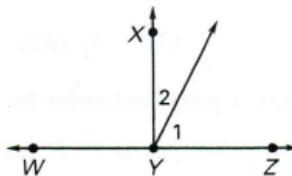
13. $\angle 1$ and $\angle 6$ are ? angles.
14. $\angle 4$ and $\angle 8$ are ? angles.
15. $\angle 2$ and $\angle 5$ are ? angles.
16. $\angle 3$ and $\angle 8$ are ? angles.



Develop a flow proof to prove the following. (3.2)

17. Given: $\overrightarrow{YX} \perp \overrightarrow{WZ}$

Prove: $m\angle 1 + m\angle 2 = m\angle WYX$



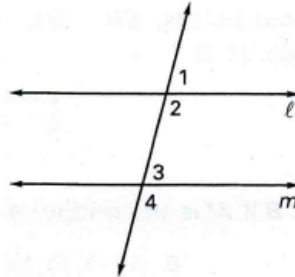
Cumulative Review

For use after Chapters 1-3

Prove using the two-column method. (3.3)

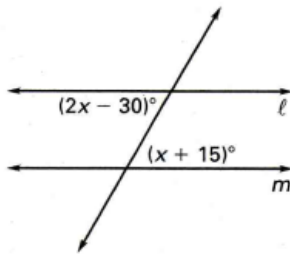
18. Given: $\ell \parallel m$

Prove: $\angle 1$ and $\angle 4$ are supplementary

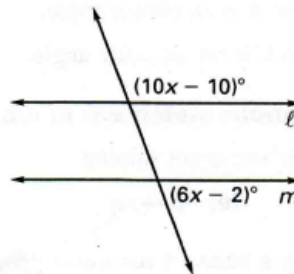


Find the value of x that makes $\ell \parallel m$. (3.4)

19.

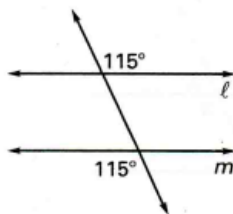


20.

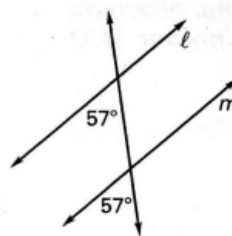


State the theorem or postulate you would use to show $\ell \parallel m$. (3.5)

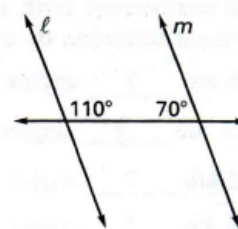
21.



22.



23.



Determine if $\overline{AB} \parallel \overline{CD}$. (3.6)

24. $A(0, 5), B(2, 3)$

$C(-4, 2), D(-1, -2)$

25. $A(0, 3), B(-2, 0)$

$C(0, -4), D(2, -1)$

Find the slope of the line that is perpendicular to \overline{AB} . (3.7)

26. $A(7, -1), B(4, 2)$

27. $A(-3, 6), B(7, 2)$