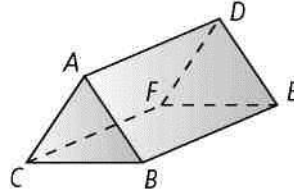## Geometry: Chapter 1A Review

Lesson 1-2

Write *true* or *false* and explain.

7. A, D, F are coplanar.   **8.** $\overleftrightarrow{AC}$ and $\overleftrightarrow{FE}$ are coplanar.
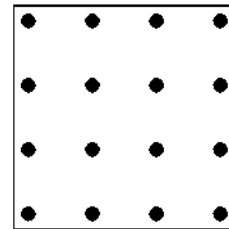
9. *A*, *B*, *E* are coplanar.   **10.** *D*, *A*, *B*, *E* are coplanar.

11. *A* and *C* are colinear.   **12.** *D*, *E*, and *B* are collinear.

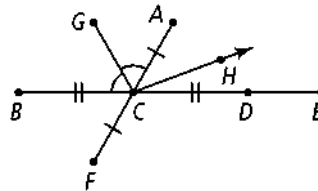**13.** How many sets of four collinear points are there in a 4-by-4 geoboard as pictured at the right?

14. $\overrightarrow{AB}$ and $\overleftrightarrow{CD}$ do not intersect but $\overrightarrow{DC}$ intersects $\overrightarrow{AB}$ in one point. Make a sketch that shows this.

Lessons 1-3 and 1-4

Use the figure at the right for Exercises 15–20.

15. If *BC* = 12 and *CE* = 15, then *BE* = ☐.

16. ☐ is the angle bisector of ☐.

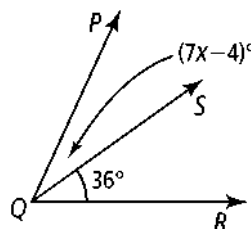**17. Algebra** *BC* = 3*x* + 2 and *CD* = 5*x* − 10. Solve for *x*.

18. Algebra If $AC = 5x - 16$ and $CF = 2x - 4$, then $AF = $ ☐

19. $m\angle BCG = 60$, $m\angle GCA = $ ☐ , and $m\angle BCA = $ ☐ .
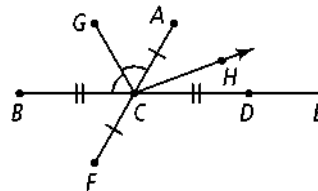
20. $m\angle ACD = 60$ and $m\angle DCH = 20$. Find $m\angle HCA$.

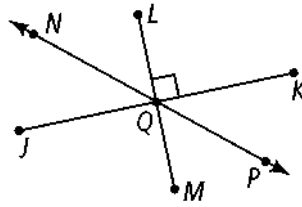**21. Algebra** In the figure at the right, $m\angle PQR = 4x + 47$. Find $m\angle PQS$.

22. Algebra Points A, B, and C are collinear with B between A and C. $AB = 4x - 1$, $BC = 2x + 1$, and $AC = 8x - 4$. Find AB, BC, and AC.

Lesson 1-5

Name the angle or angles in the diagram described by each of the following.

23. supplementary to $\angle NQK$

24. vertical to $\angle PQM$

25. congruent to $\angle NQJ$

26. adjacent and congruent to $\angle JQM$

27. complimentary to $\angle KQP$

28. $\angle XYZ$ and $\angle XYW$ are complementary angles. $m\angle XYZ = 3x + 9$ and $m\angle XYW = 5x + 9$. What are $m\angle XYZ$ and $m\angle XYW$?

29. $\angle ABC$ and $\angle DEF$ are supplementary angles. The measure of $\angle DEF$ is twenty degrees less than three times the measure of $\angle ABC$. What are $m\angle ABC$ and $m\angle DEF$?

30. $\overrightarrow{SQ}$ bisects $\angle RST$. $m\angle QST = 2x + 18$ and $m\angle RST = 6x - 2$. What is $m\angle RSQ$?