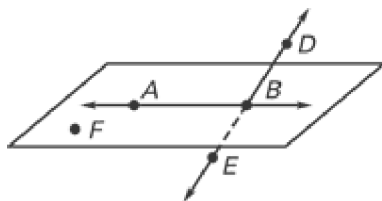


Chapter 2 Midterm Review

Short Answer

Use the diagram to decide whether the statement is *true* or *false*.



1. Through points A , B , and D , there exists exactly one plane.
2. Through points D , B , and E , there exists exactly one plane.
3. Through points A and E , there exists exactly one line.
4. Line AE lies in plane AFE .

Predict the next three numbers.

5. 2, 5, 8, 11, ...
6. 1, 2, 4, 7, ...
7. 1, -5, 25, -125, ...
8. $0, \frac{4}{5}, 1\frac{3}{5}, 2\frac{2}{5}, \dots$
9. 11, 15, 23, 35, ...
10. -3.5, 7, -14, 28, ...

Write the inverse, converse, and contrapositive of the conditional statement.

11. If the sky is clear, then we can see the stars at night.

Inverse: _____

Converse: _____

Contrapositive: _____

Rewrite the biconditional statement as two conditional statements.

12. Two segments are congruent if and only if they have the same length.

Decide whether the statement is *true* or *false*. If false, provide a counterexample.

13. If four points are collinear, then they are coplanar.
14. Through three noncollinear points there exists exactly one line.

Chapter 2 Midterm Review Answer Section

SHORT ANSWER

1. true
2. false
3. true
4. true
5. 14, 17, 20
6. 11, 16, 22
7. 625, -3125, 15,625
8. $3\frac{1}{5}$, 4, $4\frac{4}{5}$
9. 51, 71, 95
10. -56, -112, -224
11. Inverse: If the sky is not clear, then we cannot see the stars at night. Converse: If we can see the stars at night, then the sky is clear. Contrapositive: If we cannot see the stars at night, then the sky is not clear.
12. If two segments are congruent, then they have the same length. If two segments have the same length, then they are congruent.
13. true
14. false; Through any two of the points there is a line. The third point is not necessarily on that line.