**Geometry**

**Chapter 2**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Question** |  **#1** | **#2** | **#3** | **#4** | **#5** | **#6** | **#7** | **#8** | **#9** | **#10** | **#11** | **Total** |
| **Possible Points** | **10** | **5** | **15** | **5** | **5** | **5** | **5** | **10** | **10** | **15** | **15** | **100** |
| **Points****Earned** |  |  |  |  |  |  |  |  |  |  |  |  |

****

**1. Describe the pattern and say what the next two numbers in the sequence are.**

4, 6, 9, 13, 18, . . .

**2. Rewrite the conditional statement in if-then form.**

There are 12 eggs if the carton is full.

If-then form: If \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ then \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**3. Match the converse, inverse, and contrapositive of the following statements and state whether or not each statement is True or False.**

If I play the flute, then I’m a musician.

If I’m a musician then I play the flute

Converse

Inverse

Contrapositive

If I’m not a musician, then I don’t play the flute.

If I don’t play the flute, then I’m not a musician.

If Poe wants to leave learning lab, then he needs to write a pass.

If Poe doesn’t need to write a pass, then he does not want

to leave learning lab.

Converse

Inverse

Contrapositive

If Poe does not want to leave learning lab, then he does

not need to write a pass.

If Poe needs to write a pass, then he wants to leave

learning lab.

**4. Rewrite the biconditional statement as a conditional statement and its converse.**

Two lines are perpendicular if and only if they intersect to form right angles

Conditional statement:

Converse:

**5. Fill in the blank of the following statement.**

Completing and solving proofs uses \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ reasoning, through facts and laws of logic.

**6. For the following statements, draw a picture to illustrate each postulate.**

1. If two points lie in a plane, then the line containing them lies in the plane.
2. If two lines intersect, then their intersection is exactly one point.

**7.** **Use the diagram to decide whether the**

**statement is true of false.**

1. Points E, F, and H lie in plane R.

True or False

1. The intersection of planes Q and R form line n.

True or False

1. Points E and F lie in the plane R, thus line m lies entirely in plane R.

True or False

**8. Solve the following equations and give a reason for each step. (hint: The tables are the perfect size for each problem)**

a.

|  |  |
| --- | --- |
| 8x – 5 = -2x -15 | Given |
|  |  |
|  |  |
| x = -1 |  |

b.

|  |  |
| --- | --- |
| 5(2x – 1) = 9x + 2 | Given |
|  |  |
|  |  |
|  |  |

**9.** **Solve for x and y, and state what each angle is equal to.**

$$(17y-9)°$$

$$(5x+1)°$$

$$4y°$$

$$(21x-3)°$$

**10. Complete the following proofs by a two column proof .**

a. $If ∠1≅∠2, then ∠3 ≅∠4$.

1

41

2

31

Reasons

Statements

**11.** **Complete the following proofs by a two column proof AND a written proof.**

**Given: AL = SK**

L

S

K

A

**Prove: AS = LK**

Reasons

Statements