**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Block\_\_\_\_\_**

**Write a compound statement for each conjunction and disjunction. Then find its truth value.**

***p*: 10 + 8 = 18**

***q*: September has 30 days.**

***r*: A rectangle has four sides.**

**1.** *p* and *q* .

**2.** *p* or *r*

**3.** *q* or *r*

**4.** *q* and **~***r*

**Use the following statements to write a compound statement for each conjunction and disjunction. Then find its truth value. *p*: -3 – 2 = -5**

***q*: 3(-2) = 6**

***r*: 2 + 8 > 10**

***s*: 5 – 2 ≤ 7**

1. *p* and *q*
2. *p* **∧** *r*
3. *p* or *s*
4. *r* ∨ *s*
5. *p* ∧~*q*
6. *q* ∨~*r*

**Complete the following truth tables.**

**11. 12.**

**Use the Venn Diagrams to answer the following questions.**

**13.**



**14.**

****

**15.**