

# THE SUBGROUPS OF $A_5$ .

<http://schmidt.nuigalway.ie/subgroups>

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### 1. THE CLASS OF SUBGROUPS OF ORDER 1 AND INDEX 60.

**1. 1 [1], Normal, Orb  $1^5$ .** Contains 1 group, 1 class. D.  
Below [2](#)[15], [3](#)[10], [5](#)[6].

### 2. THE CLASS OF SUBGROUPS OF ORDER 2 AND INDEX 30.

**2. 2 [15], Nor  $2^2$ , Orb  $2^2, 1$ .** Contains 2 groups, 2 classes.  
Above [1](#). Below [2](#)<sup>2</sup>,  $S_3$ [2],  $D_{10}$ [2].

### 3. THE CLASS OF SUBGROUPS OF ORDER 3 AND INDEX 20.

**3. 3 [10], Nor  $S_3$ , Orb  $3, 1^2$ .** Contains 2 groups, 2 classes. D.  
Above [1](#). Below  $S_3$ ,  $A_4$ [2].

### 4. THE CLASS OF SUBGROUPS OF ORDER 4 AND INDEX 15.

**4.  $2^2$  [5], Nor  $A_4$ , Orb  $4, 1$ .** Contains 5 groups, 3 classes. DN.  
Above [2](#)[3]. Below  $A_4$ .

### 5. THE CLASS OF SUBGROUPS OF ORDER 5 AND INDEX 12.

**5. 5 [6], Nor  $D_{10}$ , Orb 5.** Contains 2 groups, 2 classes. D.  
Above [1](#). Below  $D_{10}$ .

### 6. THE CLASS OF SUBGROUPS OF ORDER 6 AND INDEX 10.

**6.  $S_3$  [10], Selfnor, Der 3, Orb  $3, 2$ .** Contains 6 groups, 4 classes. N.  
Above [3](#), [2](#)[3]. Below  $A_5$ .

### 7. THE CLASS OF SUBGROUPS OF ORDER 10 AND INDEX 6.

**7.  $D_{10}$  [6], Selfnor, Der 5, Orb 5.** Contains 8 groups, 4 classes. N.  
Above [5](#), [2](#)[5]. Below  $A_5$ .

## 8. THE CLASS OF SUBGROUPS OF ORDER 12 AND INDEX 5.

8.  $A_4$  [5], Selfnor, Der  $2^2$ , Orb 4, 1. Contains 10 groups, 5 classes. N.  
Above  $2^2$ ,  $3[4]$ . Below  $A_5$ .

## 9. THE CLASS OF SUBGROUPS OF ORDER 60 AND INDEX 1.

9.  $A_5$  [1], Selfnor, Perfect, Orb 5. Contains 59 groups, 9 classes. DN.  
Above  $A_4$ [5],  $D_{10}$ [6],  $S_3$ [10].