

## Set Notation

For this worksheet you need to know that the symbol  $\cap$  means the **intersection** of sets (ie numbers which are in both sets).

- 1)  $A = \{\text{multiples of 3 less than 31}\}$   
 $B = \{\text{multiples of 2 less than 31}\}$   
 $C = \{\text{multiples of 5 less than 31}\}$

List the sets:

- (a) A (b) B (c) C  
(d)  $A \cap B$  (e)  $B \cap C$  (f)  $A \cap C$   
(g) Describe the set  $A \cap B$  (h) Describe the set  $B \cap C$   
(i) Describe the set  $A \cap C$  (j) Explain what is happening here.

- 2) A, B and C are as in question 1  
 $D = \{\text{multiples of 4 less than 31}\}$   
 $F = \{\text{multiples of 6 less than 31}\}$

List the sets:

- (a) D (b) F (c)  $B \cap D$   
(d)  $A \cap F$  (e) Explain what is happening in (c) and (d)  
(f) List  $D \cap F$  (g) Describe  $D \cap F$

- 3)  $A = \{\text{Factors of 36}\}$   
 $B = \{\text{Factors of 30}\}$   
 $C = \{\text{Factors of 40}\}$

List the sets:

- (a) A (b) B (c) C  
(d)  $A \cap B$  (e)  $B \cap C$  (f)  $A \cap C$   
(g) Describe the set  $A \cap B$  (h) Describe the set  $B \cap C$   
(i) Describe the set  $A \cap C$  (j) Explain what is happening here.

- 4) A, B and C are as in question 3  
 $D = \{\text{Prime numbers less than 40}\}$   
 $F = \{\text{Square numbers less than 40}\}$

List the sets:

- (a) D (b) F (c)  $B \cap D$   
(d)  $A \cap F$  (e)  $D \cap F$  (g)  $A \cap B \cap C$

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