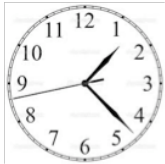


# Binary Format

## Worksheet 1

- 1 Figure 1 shows some common devices. In the spaces provided, state whether they are analogue or digital devices.

Figure 1



- 2 Explain why data needs to be converted into a binary format in order to be processed by computers.

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- 3 (a) Convert the following binary numbers into decimal.

(i) 10110101

(ii) 00101011

(iii) 11001001

- (b) Convert the following numbers into binary.

(i) 213

(ii) 69

(iii) 130

# Binary Format

## Worksheet 1

4 When a programmer was creating a program to convert decimal numbers into binary, similar to the one in Activity 2, they first wrote some pseudocode to show the logical stages of the algorithm.

Part of the pseudocode is shown below. Complete it by filling in the missing words in the spaces below.

### Program ConvertDecimalToBinary

#### Declare variables

```
var numberEntered  
var bitEight = 0  
bitSeven = 0  
bitSix = 0  
etc to...  
bitOne = 0
```

#### Test number entered

```
if (number entered  255) then  
Alert (Number must not be greater than  
255) Exit  
end if
```

#### Calculate bit eight

```
if (number entered  128) then  
bitEight = 1  
numberEntered = numberEntered -   
end if
```

#### Calculate bit seven

```
if (numberEntered >=  ) then  
bitSeven =   
numberEntered =   
end if
```