**Ques 1**

START

INPUT

Speed in km per second

Speed=Speed in km per second\*0.621371

Speed in miles per hour=Speed\*3600

OUTPUT

Speed in miles per hour

END

**Ques 2**

START

INPUT

Number n

IF N>0

IF n%2==0

“EVEN”

ELSE

“ODD”

END IF

END IF

END

**Ques 3**

START

Input:

- province

- gender

- age

IF province == 'Sindh' THEN

IF age >= 18 THEN

Print "Eligible"

ELSE

Print "Not eligible"

ENDIF

ELSE

IF gender == 'female' THEN

IF age >= 16 THEN

Print "Eligible"

ELSE

Print "Not eligible"

ENDIF

ELSE

Print "Not eligible"

ENDIF

ENDIF

END

**Ques 4**

START

Input:

- money

- onion\_price, onion\_quantity

- tomato\_price, tomato\_quantity

- grapes\_price, grapes\_quantity

- apricot\_price, apricot\_quantity

Calculate total\_cost:

total\_cost = (onion\_price \* onion\_quantity) +

(tomato\_price \* tomato\_quantity) +

(grapes\_price \* grapes\_quantity) +

(apricot\_price \* apricot\_quantity)

IF money < total\_cost THEN

Print "Insufficient money"

ELSE

change = money - total\_cost

Print change

ENDIF

END

**Ques 5**

START

Check input parameters:

- Crop type

- Soil moisture level

- Rainfall status

IF crop == corn THEN

IF soil moisture < 40 THEN

Irrigate

ELSE

No need to irrigate

ENDIF

ELSE IF crop == wheat THEN

IF soil moisture < 30 THEN

Irrigate

ELSE

Check rainfall in the last 48 hours

IF rainfall < 45 THEN

Check soil moisture again

IF soil moisture < 25 THEN

Irrigate

ELSE

No need to irrigate

ENDIF

ELSE

No need to irrigate

ENDIF

ENDIF

ENDIF

END

**QUES6**

Start

Input ride, height, age

If height < 54:

Print "Not Eligible"

End

Else:

If ride == "Sky Swing":

Print "Eligible"

Else If ride == "Carousel":

If height >= 48 AND age >= 10:

Print "Eligible"

Else:

Print "Not Eligible"

End If

Else:

If age >= 5:

Print "Eligible"

Else:

Print "Not Eligible"

End If

End If

End

**Ques 7**

START

INPUT BINARY NUMBER

IF BINARY NUMBER == 1111110

OUTPUT 0

IF BINARY NUMBER == 0110000

OUTPUT 1

IF BINARY NUMBER == 1101101

OUTPUT 2

IF BINARY NUMBER == 1111001

OUTPUT 3

IF BINARY NUMBER == 0110011

OUTPUT 4

IF BINARY NUMBER == 1011011

OUTPUT 5

IF BINARY NUMBER == 1011111

OUTPUT 6

IF BINARY NUMBER == 1110000

OUTPUT 7

IF BINARY NUMBER == 1111111

OUTPUT 8

IF BINARY NUMBER == 1111011

OUTPUT 9

END

**Ques 8**

START

INPUT NUMBER n

WHILE n>0

Last digit=n%10

Sum=sum+last digit

N=n/10

END WHILE

PRINT SUM

END

**Ques 9**

Start

Input birth\_date

Input current\_date

If month > 12:

Print "Invalid date"

End

If (month = 2 AND day > 29) OR (month in [4, 6, 9, 11] AND day > 30):

Print "Invalid date"

End

If day > 31:

Print "Invalid date"

End

If month <= 12 AND day <= 31:

Calculate age\_year = current\_year - birth\_year

Calculate month\_age = age\_year \* 12

Calculate days\_age = age\_year \* 365

If (year % 4 == 0 AND year % 100 != 0) OR (year % 400 == 0):

Print "Valid date"

Else:

Print "Invalid date"

If (month is September, June, April, November) AND day < 30:

Print "Valid date"

Else:

Print "Invalid date"

End

**QUES10**

**START**

**num = "some string with digits"**

**n = length of num**

**i = 0**

**result = 0**

**WHILE i < n DO**

**IF num[i] == '9' THEN**

**DELETE num[i]**

**n = n - 1**

**result = -9**

**ELSE**

**result = i**

**END IF**

**i = i + 1**

**END WHILE**

**OUTPUT result**

**END**

**Ques 11**

START

INPUT A, B

LOOP THROUGH

WHILE

IF B == 0 THEN

GCD=A

IF GCD==1 THEN

OUTPUT "Coprime"

ELSE OUTPUT “Not Coprime”

END

END IF

R = A/B

A=B, B=R

END WHILE

**Ques 12**

Start

Set jug5L = 0, jug3L = 0

Set jug A = 0

Fill jug3L with 3L water

While (jug5L is not 5L):

Pour jug3L into jug5L

If jug5L is full (5L):

Add the filled amount from jug5L to jug A

Empty jug5L into jug A

Fill jug3L again with 3L water

Pour the 4L measured into the sensor quickly (jug A will now have 4L)

End

**Ques 13**

START

INPUT N, M, W

IF N == 0 THEN

OUTPUT "N cannot be measured"

END

END IF

R = min(N, M)

WHILE R > 0 DO

IF M % N == 0 THEN

GCD = N

ELSE

GCD = R

END IF

IF W % GCD == 0 THEN

IF W > M THEN

OUTPUT "W can be measured"

ELSE

OUTPUT "W cannot be measured"

END IF

ELSE

OUTPUT "N cannot be measured"

END IF