**1. Which one create a vector of the even whole numbers between 31 and 75.**

a) 32:2:75 b) 31:75,2

c)31,33,...,75 d) 31-75/2

**Answer1: a**

**2. Let x = [2 5 1 6]. How can we compute the square root of each element**

a) square(x) b) x.^(1/2)

c) [1.4 2.2 1 sqrt(6)] d) x^(1/2)

**Answer2: b**

**3. Let x = [3 2 6 8]' and y = [4 1 3 5]. What is the result of x.\*y ?**

a) 72

b) [34 21 63 85]

c) ??? Error using ==> times

Matrix dimensions must agree.

d) 48

**Answer3: c**

**4. Evaluate 2+floor(6/9+3\*2)/2-3**

a) 1 b) 2 c) 3

d) unknown function or variable

**Answer4: b**

**5.** **Given that x = [1 5 2 8 9 0 1] and y = [5 2 2 6 0 0 2]. Explain the results of the “x > y”**

**commands:**

a) 0 1 0 1 1 0 0

b) True

c) 0

d) False

**Answer5: a**

**6. Evaluate log10(100)-log(exp(2))**

a) 1 b) 2 c) 3 d) 0

**Answer6: d**

**7. Explain the command “clear”**

a) clears the command window

b) removes all variables

c) removes all compiled functions

d) clears the function specified

**Answer7: b**

**8. What is the output of the code**

T = 9; if (T < 30) h = 2\*T + 1

elseif (T < 10) h = T-2

else h = 0

end

a) 0 b) 19 c) 11 d) 9

**Answer8: b**

**9. What is the output of the code A=[1,2,3;4,-7,0]**

**sum(A,2)**

a)6 b)[6,-3] c)3 d)[5,-5,3, -3]

-3

**Answer9: a**

1. **Write a script that asks for a temperature in degrees Celcius and computes the equivalent temperature in Fahrenheit. (°C= (°F – 32) / 1.8 )**

cel=input('Enter a celcius value:');

fahrenheit=(cel\*1.8)+32

1. **The three interior angles of any triangle add up to 180. Complete the program fragment below to print scalene, isoceles, or equilateral given three angles.**

% Assume a, b, and c are positive integers that sum to 180

if ( a~=b && a~=c && b~=c )

disp(’Scalene triangle’)

else

if ( a==b && a==c && b=c )

disp(’Equilateral triangle’)

else

disp(’Isoceles triangle’)

end

end

1. **Write a program that finds the roots of a second order equation. The coefficients (a, b,c) should be entered by user.**

ax2 + bx + c = 0

The discriminate of the equation: Δ = b2 – 4ac

If Δ < 0 then “There is no reel root”

Else if Δ = 0 then x1 = x2 = -b / 2a

Else x1 = (-b + √Δ) / 2a

x2 = (-b - √Δ) / 2a

ANSWER:

a=input('Enter a value for equation:');

b=input('Enter b value for equation:');

c=input('Enter c value for equation:');

delta=b^2-4\*a\*c;

if(delta<0)

fprintf('there is no root')

end

if(delta==0)

x=-(b/2\*a);

fprintf('x1=x2=')

x

else

x1=(-b+delta^(1/2))/(2\*a)

x2=(-b-delta^(1/2))/(2\*a)

end