

**BIL113E - Quiz 3**  
**CRN: 30156**

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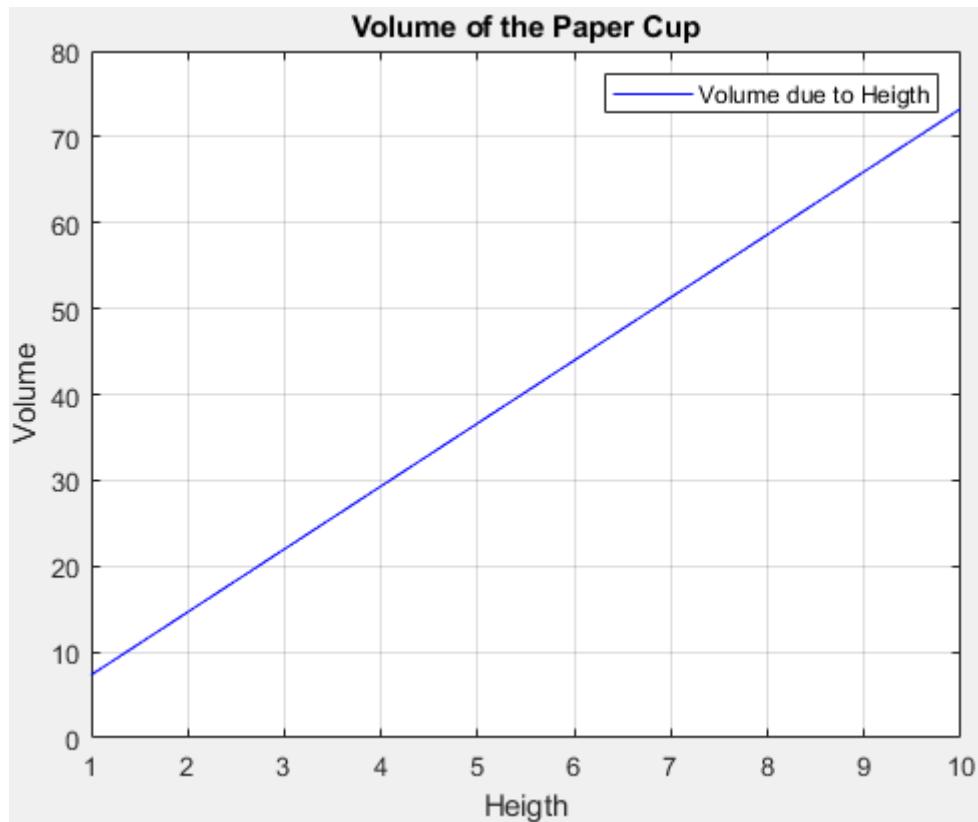
**paperCup.m – Function M File:**

```
function [volume,sArea] = paperCup(R1,R2,h)
volume = (1/3)*pi*h*(R1+R2);
sArea = (pi*(R1+R2))*(sqrt(((R2 - R1)^2)+(h.^2)))+(pi*(R1^2));
end
```

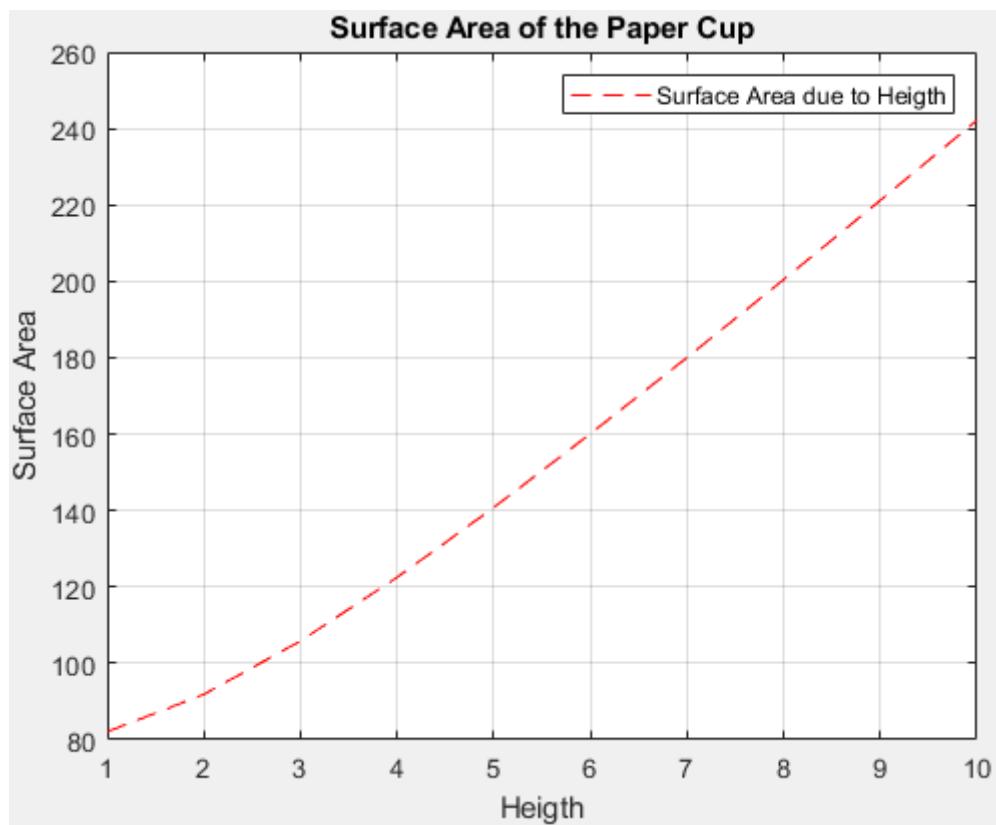
**graphFigure.m – Script M File:**

```
h = [1:1:10];
R1 = input('R1= '); R2 = input('R2= ');
[V,sArea] = paperCup(R1,R2,h);
figure(1);
plot(h,V,'b');
title('Volume of the Paper Cup');
legend('Volume due to Height');
xlabel('Height'); ylabel('Volume');
grid on;
figure(2);
plot(h,sArea,'r--');
title('Surface Area of the Paper Cup');
legend('Surface Area due to Height');
xlabel('Height'); ylabel('Surface Area');
grid on;
figure(3);
subplot(1,2,1),plot(h,V,'b'),grid on,title('Volume of the
Paper Cup'),legend('Volume'), xlabel('Height'), ylabel('Volume');
subplot(1,2,2),plot(h,sArea,'r--'),grid on,title('Surface Area
of the Paper Cup'),legend('Surface
Area'), xlabel('Height'), ylabel('Surface Area');
```

**Figure (1):**



**Figure (2):**



**Figure (3):**

