

1.  $\frac{1}{2} \ln \frac{1}{2}$   
2.  $\frac{1}{2} \ln \frac{1}{2}$   
3.  $\frac{1}{2} \ln \frac{1}{2}$   
4.  $\frac{1}{2} \ln \frac{1}{2}$   
5.  $\frac{1}{2} \ln \frac{1}{2}$   
6.  $\frac{1}{2} \ln \frac{1}{2}$   
7.  $\frac{1}{2} \ln \frac{1}{2}$   
8.  $\frac{1}{2} \ln \frac{1}{2}$   
9.  $\frac{1}{2} \ln \frac{1}{2}$   
10.  $\frac{1}{2} \ln \frac{1}{2}$

1.  $\frac{1}{2} \ln \frac{1}{2}$   
2.  $\frac{1}{2} \ln \frac{1}{2}$   
3.  $\frac{1}{2} \ln \frac{1}{2}$   
4.  $\frac{1}{2} \ln \frac{1}{2}$   
5.  $\frac{1}{2} \ln \frac{1}{2}$   
6.  $\frac{1}{2} \ln \frac{1}{2}$   
7.  $\frac{1}{2} \ln \frac{1}{2}$   
8.  $\frac{1}{2} \ln \frac{1}{2}$   
9.  $\frac{1}{2} \ln \frac{1}{2}$   
10.  $\frac{1}{2} \ln \frac{1}{2}$

Handwritten text at the top right of the page, possibly a date or page number.

Main body of handwritten text, appearing to be a list or series of entries, possibly related to a collection or inventory.







Handwritten text in a cursive script, likely a form of Arabic or Persian calligraphy.

Handwritten text in a cursive script, likely a form of Arabic or Persian calligraphy.

Handwritten text in a cursive script, likely a form of Arabic or Persian calligraphy.

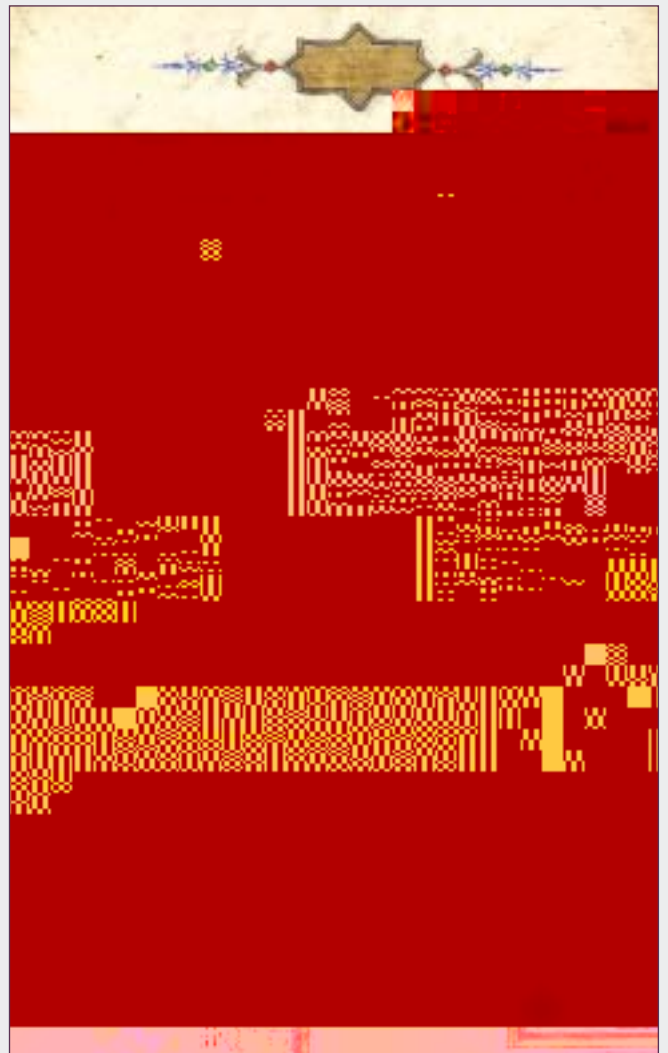
Handwritten text in a cursive script, likely a form of Arabic or Persian calligraphy.

Handwritten text in a cursive script, likely a form of Arabic or Persian calligraphy.

Handwritten text in a cursive script, likely a form of Arabic or Persian calligraphy.

Handwritten text in a cursive script, likely a form of Arabic or Persian calligraphy.

Handwritten text in a cursive script, likely a form of Arabic or Persian calligraphy.





1.  $\Delta ABC$  is a triangle with  $\angle C = 90^\circ$ .  
 A line segment  $DE$  is drawn such that  $D$  is on  $AC$  and  $E$  is on  $BC$ .  
 $DE \parallel AB$ .  
 Prove that  $AD^2 + BE^2 = AB^2$ .

1.  $\Delta ABC$  is a triangle with  $\angle C = 90^\circ$ .  
 A line segment  $DE$  is drawn such that  $D$  is on  $AC$  and  $E$  is on  $BC$ .  
 $DE \parallel AB$ .  
 Prove that  $AD^2 + BE^2 = AB^2$ .

2.  $\Delta ABC$  is a triangle with  $\angle C = 90^\circ$ .  
 A line segment  $DE$  is drawn such that  $D$  is on  $AC$  and  $E$  is on  $BC$ .  
 $DE \parallel AB$ .  
 Prove that  $AD^2 + BE^2 = AB^2$ .

3.  $\Delta ABC$  is a triangle with  $\angle C = 90^\circ$ .  
 A line segment  $DE$  is drawn such that  $D$  is on  $AC$  and  $E$  is on  $BC$ .  
 $DE \parallel AB$ .  
 Prove that  $AD^2 + BE^2 = AB^2$ .

4.  $\Delta ABC$  is a triangle with  $\angle C = 90^\circ$ .  
 A line segment  $DE$  is drawn such that  $D$  is on  $AC$  and  $E$  is on  $BC$ .  
 $DE \parallel AB$ .  
 Prove that  $AD^2 + BE^2 = AB^2$ .

5.  $\Delta ABC$  is a triangle with  $\angle C = 90^\circ$ .  
 A line segment  $DE$  is drawn such that  $D$  is on  $AC$  and  $E$  is on  $BC$ .  
 $DE \parallel AB$ .  
 Prove that  $AD^2 + BE^2 = AB^2$ .

6.  $\Delta ABC$  is a triangle with  $\angle C = 90^\circ$ .  
 A line segment  $DE$  is drawn such that  $D$  is on  $AC$  and  $E$  is on  $BC$ .  
 $DE \parallel AB$ .  
 Prove that  $AD^2 + BE^2 = AB^2$ .

7.  $\Delta ABC$  is a triangle with  $\angle C = 90^\circ$ .  
 A line segment  $DE$  is drawn such that  $D$  is on  $AC$  and  $E$  is on  $BC$ .  
 $DE \parallel AB$ .  
 Prove that  $AD^2 + BE^2 = AB^2$ .

8.  $\Delta ABC$  is a triangle with  $\angle C = 90^\circ$ .  
 A line segment  $DE$  is drawn such that  $D$  is on  $AC$  and  $E$  is on  $BC$ .  
 $DE \parallel AB$ .  
 Prove that  $AD^2 + BE^2 = AB^2$ .

9.  $\Delta ABC$  is a triangle with  $\angle C = 90^\circ$ .  
 A line segment  $DE$  is drawn such that  $D$  is on  $AC$  and  $E$  is on  $BC$ .  
 $DE \parallel AB$ .  
 Prove that  $AD^2 + BE^2 = AB^2$ .

10.  $\Delta ABC$  is a triangle with  $\angle C = 90^\circ$ .  
 A line segment  $DE$  is drawn such that  $D$  is on  $AC$  and  $E$  is on  $BC$ .  
 $DE \parallel AB$ .  
 Prove that  $AD^2 + BE^2 = AB^2$ .





Handwritten text in the top-left section, appearing to be a list or notes.



Handwritten text in the top-right section, appearing to be a list or notes.



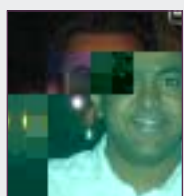
Handwritten text below the first man's portrait, including a name and some notes.

Handwritten text below the first woman's portrait, including a name and some notes.

Handwritten text in the middle-left section, appearing to be a list or notes.



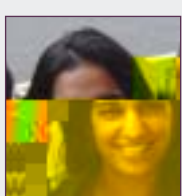
Handwritten text in the middle-right section, appearing to be a list or notes.



Handwritten text below the second woman's portrait, including a name and some notes.

Handwritten text below the second man's portrait, including a name and some notes.

Handwritten text in the bottom-left section, appearing to be a list or notes.



Handwritten text in the bottom-right section, appearing to be a list or notes.



Handwritten text below the third woman's portrait, including a name and some notes.

Handwritten text below the third woman's portrait, including a name and some notes.

1. The first step is to  
identify the  
essential elements  
of the system.  
This is done by  
analyzing the  
requirements.



www.ck12.org

1.  $\Delta ABC$  is a right triangle with  $\angle C = 90^\circ$ .  
 Let  $\angle A = \theta$ . Then  $\angle B = 90^\circ - \theta$ .  
 Let  $a, b, c$  be the sides opposite  $\angle A, \angle B, \angle C$  respectively.  
 Then  $a = c \sin \theta$ ,  $b = c \cos \theta$ , and  $c = \frac{a}{\sin \theta} = \frac{b}{\cos \theta}$ .

2.  $\Delta ABC$  is a right triangle with  $\angle C = 90^\circ$ .  
 Let  $\angle A = \theta$ . Then  $\angle B = 90^\circ - \theta$ .  
 Let  $a, b, c$  be the sides opposite  $\angle A, \angle B, \angle C$  respectively.  
 Then  $a = c \sin \theta$ ,  $b = c \cos \theta$ , and  $c = \frac{a}{\sin \theta} = \frac{b}{\cos \theta}$ .

3.  $\Delta ABC$  is a right triangle with  $\angle C = 90^\circ$ .  
 Let  $\angle A = \theta$ . Then  $\angle B = 90^\circ - \theta$ .  
 Let  $a, b, c$  be the sides opposite  $\angle A, \angle B, \angle C$  respectively.  
 Then  $a = c \sin \theta$ ,  $b = c \cos \theta$ , and  $c = \frac{a}{\sin \theta} = \frac{b}{\cos \theta}$ .

4.  $\Delta ABC$  is a right triangle with  $\angle C = 90^\circ$ .  
 Let  $\angle A = \theta$ . Then  $\angle B = 90^\circ - \theta$ .  
 Let  $a, b, c$  be the sides opposite  $\angle A, \angle B, \angle C$  respectively.  
 Then  $a = c \sin \theta$ ,  $b = c \cos \theta$ , and  $c = \frac{a}{\sin \theta} = \frac{b}{\cos \theta}$ .

5.  $\Delta ABC$  is a right triangle with  $\angle C = 90^\circ$ .  
 Let  $\angle A = \theta$ . Then  $\angle B = 90^\circ - \theta$ .  
 Let  $a, b, c$  be the sides opposite  $\angle A, \angle B, \angle C$  respectively.  
 Then  $a = c \sin \theta$ ,  $b = c \cos \theta$ , and  $c = \frac{a}{\sin \theta} = \frac{b}{\cos \theta}$ .

6.  $\Delta ABC$  is a right triangle with  $\angle C = 90^\circ$ .  
 Let  $\angle A = \theta$ . Then  $\angle B = 90^\circ - \theta$ .  
 Let  $a, b, c$  be the sides opposite  $\angle A, \angle B, \angle C$  respectively.  
 Then  $a = c \sin \theta$ ,  $b = c \cos \theta$ , and  $c = \frac{a}{\sin \theta} = \frac{b}{\cos \theta}$ .

7.  $\Delta ABC$  is a right triangle with  $\angle C = 90^\circ$ .  
 Let  $\angle A = \theta$ . Then  $\angle B = 90^\circ - \theta$ .  
 Let  $a, b, c$  be the sides opposite  $\angle A, \angle B, \angle C$  respectively.  
 Then  $a = c \sin \theta$ ,  $b = c \cos \theta$ , and  $c = \frac{a}{\sin \theta} = \frac{b}{\cos \theta}$ .

100

8.  $\Delta ABC$  is a right triangle with  $\angle C = 90^\circ$ .  
 Let  $\angle A = \theta$ . Then  $\angle B = 90^\circ - \theta$ .  
 Let  $a, b, c$  be the sides opposite  $\angle A, \angle B, \angle C$  respectively.  
 Then  $a = c \sin \theta$ ,  $b = c \cos \theta$ , and  $c = \frac{a}{\sin \theta} = \frac{b}{\cos \theta}$ .

9.  $\Delta ABC$  is a right triangle with  $\angle C = 90^\circ$ .  
 Let  $\angle A = \theta$ . Then  $\angle B = 90^\circ - \theta$ .  
 Let  $a, b, c$  be the sides opposite  $\angle A, \angle B, \angle C$  respectively.  
 Then  $a = c \sin \theta$ ,  $b = c \cos \theta$ , and  $c = \frac{a}{\sin \theta} = \frac{b}{\cos \theta}$ .

- ...  
17 -20
- ...  
4 -7
- ...  
19 -20
- ... 2. ...  
( ... )  
11 -16
- ... /10  
15 -17
- ...  
17 -19
- ...  
23 -26
- ... ( ... )  
3 -5 A j
- ... ( ... )  
17 -20
- ... ( ... )  
18 -21

...  
...  
...  
...  
...  
...  
...

- ...  
2006
- ... 200
- ... 5 , 2006
- ...  
19 , 2006
- ... 1 ...  
26 , 2006
- ...  
15 A , 2007