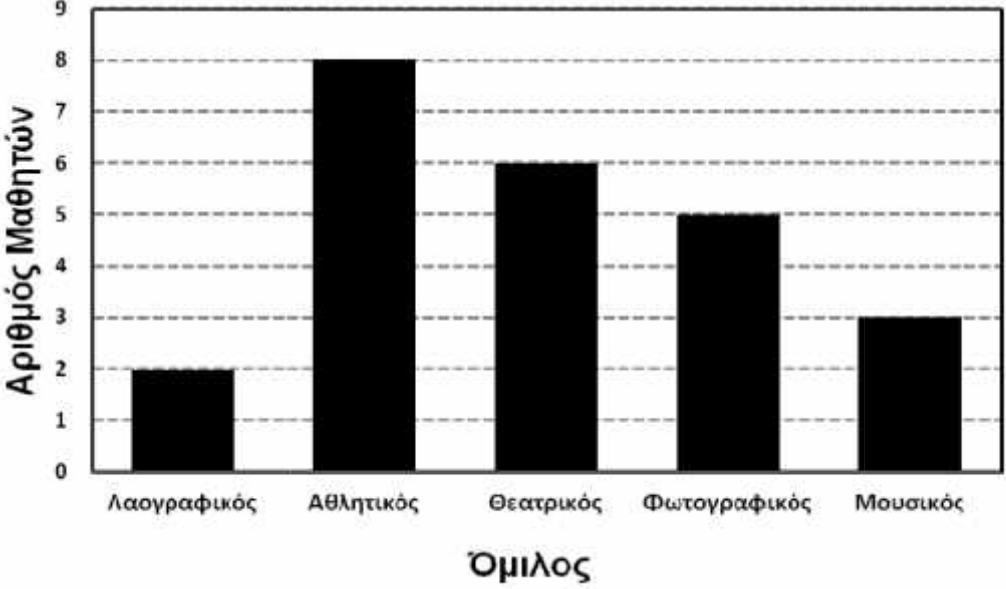


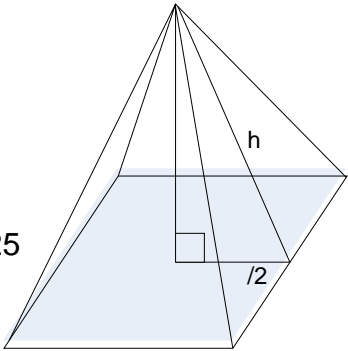
2014

μ :
2-

μ μ : ,6 2014
8:00 – 11:00

1.	<p>μ μ 4cm .</p> <p>:</p> <p>$V = 4^3 = 64 \text{ cm}^3$</p>													
2.	<p>μ μ μ μ μ μ μ μ .</p>  <table border="1"><caption>Αριθμός Μαθητών ανά Όμιλο</caption><thead><tr><th>Όμιλος</th><th>Αριθμός Μαθητών</th></tr></thead><tbody><tr><td>Λαογραφικός</td><td>2</td></tr><tr><td>Αθλητικός</td><td>8</td></tr><tr><td>Θεατρικός</td><td>6</td></tr><tr><td>Φωτογραφικός</td><td>5</td></tr><tr><td>Μουσικός</td><td>3</td></tr></tbody></table> <p>Αριθμός Μαθητών</p> <p>Όμιλος</p> <p>Λαογραφικός Αθλητικός Θεατρικός Φωτογραφικός Μουσικός</p> <p>μ μ μ μ :</p> <p>() μ μ μ ,</p> <p>() μ μ μ .</p> <p>:</p> <p>() 6 μ μ .</p> <p>() μ μ μ : 2+8+6+5+3=24.</p>	Όμιλος	Αριθμός Μαθητών	Λαογραφικός	2	Αθλητικός	8	Θεατρικός	6	Φωτογραφικός	5	Μουσικός	3	
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3.	<p style="text-align: center;"> μ μ μ μ μ μ 15, 11, 13, 8, 5 2 6 </p> <p style="text-align: center;">:</p> $- = \frac{15+11+13+8+5+2}{6} = \frac{54}{6} = 9$	
4.	<p style="text-align: center;"> €500 μ 20% </p> <p style="text-align: center;">:</p> $500 \cdot \frac{20}{100} = €100$ $500 - 100 = €400 \quad \mu$ $500 \cdot \frac{80}{100} = €400 \quad \mu$	
5.	<p style="text-align: center;"> 3 cm 5 cm . </p> <p style="text-align: center;">:</p> <p>() μ ,</p> <p>() .</p> <p style="text-align: center;">:</p> <p>() = 2 R = 2 · 3 · 5 = 30 cm²</p> <p>() V = R² = · 3² · 5 = 45 cm³</p>	
6.	<p style="text-align: center;"> μ μ μ μ μ μ : 3, 1, 2, 2, 5, 2, 4, 3. </p> <p style="text-align: center;">:</p> <p>() μ () ,</p> <p>() μ () .</p> <p style="text-align: center;">:</p> <p>μ μ : 1, 2, 2, 2, 3, 3, 4, 5</p> <p>() = 2</p> <p>() = $\frac{2+3}{2} = \frac{5}{2} = 2,5$</p>	

7.	<p> 25 cm^2 : 7 cm </p> <p> $() \mu$, </p> <p> $() \mu$. </p> <p> : </p> <p> $() = ^2 \Rightarrow ^2 = 25 \Rightarrow = \sqrt{25} \Rightarrow = 5 \text{ cm}$ </p> <p> $E = \cdot = (4 \cdot 5) \cdot 7 = 140 \text{ cm}^2$ </p> <p> $() V = E \cdot = 25 \cdot 7 = 175 \text{ cm}^3$ </p>	
8.	<p> 198μ 45% </p> <p> : </p> <p> $198 \quad 45\% = \frac{198 \cdot 100}{45} = \frac{19800}{45} = 440 \mu$ </p> <p> 100% </p>	
9.	<p> 4 cm 6 cm </p> <p> : </p> <p> $() \mu$, </p> <p> $() \mu$. </p> <p> : </p> <p> $() = ^2 = 6^2 = 36 \text{ cm}^2$ </p> <p> $= 4 = 4 \cdot 6 = 24 \text{ cm}$ </p> <p> $\therefore ^2 + \left(\frac{\quad}{2}\right)^2 = h^2 \Rightarrow 4^2 + 3^2 = h^2 \Rightarrow 16 + 9 = h^2 \Rightarrow h^2 = 25$ </p> <p> $h = \sqrt{25} \Rightarrow h = 5 \text{ cm}$ </p> <p> $= \frac{\beta \cdot h}{2} = \frac{24 \cdot 5}{2} = 60 \text{ cm}^2$ </p> <p> $= + = 60 + 36 = 96 \text{ cm}^2$ </p> <p> $() V = \frac{\cdot}{3} = \frac{36 \cdot 4}{3} = 48 \text{ cm}^3$ </p> 	

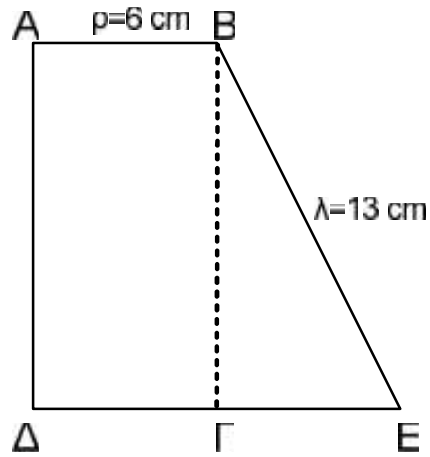
10.

μ

$= 221 \text{ cm}^2$

6 cm 11 cm.

:



$$= (R + \rho) \cdot h \Rightarrow 221 = (11 + 6) \cdot h \Rightarrow 221 = 17 \cdot h \Rightarrow h = 13 \text{ cm}$$

$$R - \rho = 11 - 6 = 5 \text{ cm}$$

$$\lambda^2 = 5^2 + h^2 \Rightarrow h^2 = 169 - 25 \Rightarrow h^2 = 144 \Rightarrow h = 12 \text{ cm}$$

$$V = \frac{1}{3} (R^2 + R \cdot \rho + \rho^2) = \frac{1}{3} (11^2 + 11 \cdot 6 + 6^2)$$

$$V = \frac{1}{3} (121 + 66 + 36) = \frac{1}{3} \cdot 223 = 74.33 \text{ cm}^3$$

1.

μ
40 μ

μ	()	0	1	2	3	4	5
μ	(f_i)	1	4	12	8	7	8

- :
 () μ () ,
 () μ μ () ,
 () () .

:

x_i	f_i	$x_i \cdot f_i$	$(x_i - \bar{x})^2$	$(x_i - \bar{x})^2 \cdot f_i$
0	1	0	9	9
1	4	4	4	16
2	12	24	1	12
3	8	24	0	0
4	7	28	1	7
5	8	40	4	32
	40	120		76

() $x = 2$

() $\bar{x} = \frac{\sum x_i \cdot f_i}{\sum f_i} = \frac{120}{40} = 3$

() $= \sqrt{\frac{\sum (x_i - \bar{x})^2 \cdot f_i}{\sum f_i}} = \sqrt{\frac{76}{40}} = \sqrt{1,9} \approx 1,38$

$$R = 10 \text{ cm}, \quad r = 8 \text{ cm}$$

$$V_{\text{cylinder}} = R^2 \cdot h = 10^2 \cdot 8 = 800 \text{ cm}^3$$

$$S_{\text{top}} = R^2 = 10^2 = 100 \text{ cm}^2$$

$$S_{\text{side}} = 2 \cdot R \cdot h = 2 \cdot 10 \cdot 8 = 160 \text{ cm}^2$$

K

$$r = 6 \text{ cm}, \quad h = 8 \text{ cm}$$

$$R^2 = 6^2 + 8^2 \Rightarrow R = 10 \text{ cm}$$

$$S_{\text{top}} = R^2 = 10^2 = 100 \text{ cm}^2$$

$$S_{\text{side}} = 2 \cdot r \cdot h = 2 \cdot 6 \cdot 8 = 96 \text{ cm}^2$$

$$V_{\text{cylinder}} = \frac{R^2 \cdot h}{3} = \frac{10^2 \cdot 8}{3} = 96 \text{ cm}^3$$

$$S_{\text{total}} = S_{\text{side}} + E_{\text{top}} + S_{\text{bottom}} + (S_{\text{top}} - S_{\text{bottom}}) \Rightarrow$$

$$= 96 + 60 + 100 + (100 - 36) \Rightarrow S_{\text{total}} = 384 \text{ cm}^2$$

$$V_{\text{total}} = V_{\text{cylinder}} - V_{\text{cone}} = 800 - 96 = 704 \text{ cm}^3$$