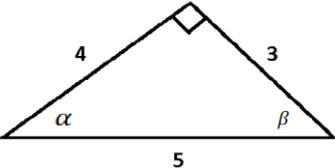
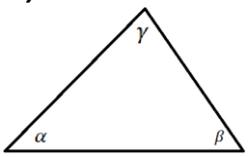
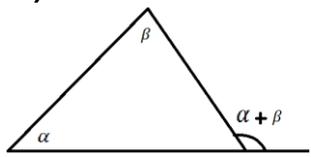
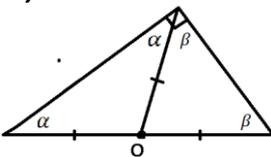
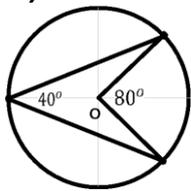
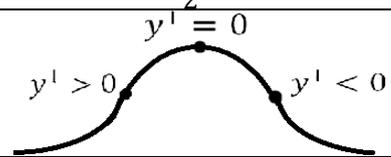


# СПРАВОЧНИК ЕГЭ ПО МАТЕМАТИКЕ

<b>1)</b> $\frac{1}{2} = 0.5; \frac{1}{4} = 0.25; \frac{3}{4} = 0.75; \frac{1}{5} = 0.2; \frac{1}{8} = 0.125; \frac{3}{8} = 0.375; \frac{5}{8} = 0.625; \frac{7}{8} = 0.875;$				
<b>2)</b> $1\%=0.01; 10\%=0,1; 20\%=0,2; 50\%=0,5; 34\%=0,34; 100\%=1; 112\%=1,12$				
<b>3)</b> $a^x \cdot a^y = a^{x+y}$ $a^x : a^y = a^{x-y}$ $(a^y)^x = a^{xy}$ $(a \cdot b)^x = b^x \cdot a^x$ $(\frac{a}{b})^x = \frac{a^x}{b^x}$	<b>4)</b> $\sqrt{a} \cdot \sqrt{b} = \sqrt{ab}$ $\frac{\sqrt{a}}{\sqrt{b}} = \sqrt{\frac{a}{b}}$ $\sqrt{a} \cdot \sqrt{a} = a$ $\sqrt{7} \cdot \sqrt{7} = 7; \frac{3}{\sqrt{3}} = \sqrt{3}$	<b>5)</b> $\log_a b = x \leftrightarrow b = a^x$ $a^{\log_a x} = x$ $\log_a x + \log_a y = \log_a(xy)$ $\log_a x - \log_a y = \log_a \frac{x}{y}$ $k \cdot \log_a x = \log_a(x^k); \log_a b = \frac{\log_c b}{\log_c a}$	<b>6)</b> $2^0 = 1; 2^2 = 4$ $3^2 = 9; 3^3 = 27;$ $3^4 = 81; a^0 = 1$ $\log_a a = 1$ $\log_a 1 = 0$ $\log_2 8 = 3$	
<b>7)</b> $ax^2 + bx + c = 0; D = b^2 - 4ac; x_{1,2} = \frac{-b \pm \sqrt{D}}{2a}; ax^2 + bx + c = a(x - x_1)(x - x_2)$				
<b>8)</b> $\text{синус} = \frac{\text{прот. катет}}{\text{гипотенуза}}; \text{косинус} = \frac{\text{прилеж. катет}}{\text{гипотенуза}}; \text{тангенс} = \frac{\text{прот. катет}}{\text{прилеж. катет}}$				
<b>9)</b> 	$\sin \alpha = \frac{3}{5} = 0,6$ $\cos \alpha = \frac{4}{5} = 0,8$	$\cos \beta = \sin \alpha = 0,6$ $\sin \beta = \cos \alpha = 0,8$ $\text{tg} \alpha = \frac{3}{4} = 0,75$ $\text{ctg} \beta = \text{tg} \alpha = 0,75$	<b>10)</b> $c^2 = a^2 + b^2$ $5^2 = 3^2 + 4^2$ (Теор. Пифагора)	
<b>11)</b> 	<b>12)</b> 	<b>13)</b> 	<b>14)</b> 	<b>15)</b> $S_{\text{треуг.}} = \frac{a \cdot h}{2};$ $S_{\text{трапец.}} = \frac{a + b}{2} \cdot h;$ $S_{\text{круга}} = \pi R^2$
<b>16)</b> $\sin^2 \alpha + \cos^2 \alpha = 1$ $\sin \alpha = \pm \sqrt{1 - \cos^2 \alpha}$ $\cos \alpha = \pm \sqrt{1 - \sin^2 \alpha}$		<b>17)</b> $\sin 2\alpha = 2 \sin \alpha \cdot \cos \alpha$ $\cos 2\alpha = \cos^2 \alpha - \sin^2 \alpha$ $\text{tg} \alpha = \frac{\sin \alpha}{\cos \alpha}$		
<b>18)</b> $f'(x_0) = \text{tg} \alpha$ $f'(x_0) = k - \text{угл. коэф. касат.}$		$f' > 0 \Leftrightarrow f - \text{возрастает}$ $f' < 0 \Leftrightarrow f - \text{убывает}$		
				
<b>19)</b> $c' = 0; x' = 1; (x^2)' = 2x; (x^3)' = 3x^2; (e^x)' = e^x; (\sin x)' = \cos x; (\cos x)' = -\sin x; (\sqrt{x})' = \frac{1}{2\sqrt{x}}$				
<b>20)</b> $P(A) = \frac{m}{n}$	<b>21)</b> $d^2 = a^2 + b^2 + c^2$	<b>22)</b> $l_2 = k \cdot l_1 \Rightarrow P_2 = k \cdot P_1; S_2 = k^2 \cdot S_1; V_2 = k^3 \cdot V_1$		
<b>23)</b> $\cos x = a$ $x = \pm \arccos a + 2\pi n, n \in Z$		$\sin x = a$ $x = (-1)^k \arcsin a + \pi k, k \in Z$		
$\text{tg} x = a$ $x = \arctg a + \pi n, n \in Z$				
<b>24)</b> $V_{\text{куба}} = a^3; V_{\text{пар-да}} = a \cdot b \cdot c; V_{\text{призмы}} = S_{\text{осн}} \cdot h; V_{\text{цил}} = \pi R^2 h; V_{\text{кон}} = \frac{1}{3} \pi R^2 h; V_{\text{шара}} = \frac{4}{3} \pi R^3$				