

$$R = 1 \text{ м.}, \quad \omega = 1 \frac{\text{рад}}{\text{с}}, \quad t_0 = 1 \text{ с.}$$

$$1. r(\varphi) = R(1 - \cos \varphi \cos 3\varphi), \quad \varphi = \omega t.$$

$$2. r(\varphi) = R \cos^2 4\varphi, \quad \varphi = \omega t/3.$$

$$3. r(\varphi) = R \sin^2 5\varphi, \quad \varphi = \omega t/2.$$

$$4. r(\varphi) = R(1 - 2 \sin \varphi), \quad \varphi = 3\omega t/2.$$

$$5. r(\varphi) = 2R \tan \varphi \sin \varphi, \quad \varphi = \omega t.$$

$$6. r(\varphi) = R \sqrt{\cos \left(\frac{3\varphi}{4} \right)}, \quad \varphi = \omega t.$$

$$7. r(\varphi) = \frac{4R}{2 - \sin \varphi}, \quad \varphi = 2\omega t.$$

$$8. r(\varphi) = R(2 - \cos 10\varphi), \quad \varphi = \omega t/4.$$

$$9. r(\varphi) = (2R)^\varphi, \quad \varphi = \omega t.$$

$$10. r(\varphi) = (R/3)^\varphi, \quad \varphi = \omega t/2.$$

$$11. r(\varphi) = R(2 - 3 \sin \varphi), \quad \varphi = \omega t.$$

$$12. r(\varphi) = R \left(1 + \frac{\sin 2\varphi}{3} \right), \quad \varphi = \omega t/4.$$

$$13. r(\varphi) = R(1 + 3 \cos \varphi), \quad \varphi = \omega t.$$

$$14. r(\varphi) = R(\cos \varphi + 2 \sin \varphi), \quad \varphi = \omega t/3.$$

$$15. r(\varphi) = R \left(\frac{\cos \varphi}{2} - 3 \sin \varphi \right), \quad \varphi = 2\omega t.$$

$$16. r(\varphi) = R(\sin \varphi - 4 \cos \varphi), \quad \varphi = \omega t.$$

$$17. r(\varphi) = R \sqrt{\cos^6 \varphi + \sin^6 \varphi}, \quad \varphi = 3\omega t/2.$$

$$18. r(\varphi) = R \tan 2\varphi, \quad \varphi = \omega t.$$

$$19. r(\varphi) = R \cot \varphi, \quad \varphi = \omega t/2.$$

$$20. r(\varphi) = R \log \varphi, \quad \varphi = \omega t.$$

$$21. r(\varphi) = R \lg \varphi, \quad \varphi = 2\omega t.$$

$$22. r(\varphi) = R\varphi^{-\varphi}, \quad \varphi = \omega t.$$

$$23. r(\varphi) = R \sqrt{1 + \varphi}, \quad \varphi = 4\omega t/3.$$

$$24. r(\varphi) = R \left(\frac{3^\varphi - 1}{\varphi} \right), \quad \varphi = 2\omega t.$$