

این ادامه متن است.این ادامه متن است.این ادامه متن است.این ادامه متن است.  
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جدول ۱: بعضی از معادلات غیرخطی که جواب‌های دقیقی به فرم (۹) و (۱۰) دارند

مراجع	جواب	معادله
]	$T = \varphi(x) + \psi(t)$	
] <td><math>T = (a/b) \ln u,</math></td> <td><math>\frac{\partial T}{\partial t} = a \frac{\partial^2 T}{\partial x^2} + b(\frac{\partial T}{\partial x})^2</math></td>	$T = (a/b) \ln u,$	$\frac{\partial T}{\partial t} = a \frac{\partial^2 T}{\partial x^2} + b(\frac{\partial T}{\partial x})^2$
] <td><math>u = \varphi(x) + \psi(t)</math></td> <td></td>	$u = \varphi(x) + \psi(t)$	
] <td><math>T = \varphi(x)\psi(t)</math></td> <td><math>\frac{\partial T}{\partial t} = a \frac{\partial}{\partial x}(T^m \frac{\partial T}{\partial x})</math></td>	$T = \varphi(x)\psi(t)$	$\frac{\partial T}{\partial t} = a \frac{\partial}{\partial x}(T^m \frac{\partial T}{\partial x})$
] <td><math>T = \varphi(x) + \psi(t)</math></td> <td><math>\frac{\partial T}{\partial t} = a \frac{\partial}{\partial x}(e^{\lambda t} \frac{\partial T}{\partial x})</math></td>	$T = \varphi(x) + \psi(t)$	$\frac{\partial T}{\partial t} = a \frac{\partial}{\partial x}(e^{\lambda t} \frac{\partial T}{\partial x})$
] <td><math>T = \varphi(x)\psi(t)</math></td> <td><math>\frac{\partial T}{\partial t} = a \frac{\partial^2 T}{\partial x^2} + aT \ln T</math></td>	$T = \varphi(x)\psi(t)$	$\frac{\partial T}{\partial t} = a \frac{\partial^2 T}{\partial x^2} + aT \ln T$
] <td><math>T = \varphi(x)\psi(t)</math></td> <td><math>\frac{\partial T}{\partial t} = ax^{-n} \frac{\partial}{\partial x}(x^n \frac{\partial T}{\partial x}) + bT \ln T</math></td>	$T = \varphi(x)\psi(t)$	$\frac{\partial T}{\partial t} = ax^{-n} \frac{\partial}{\partial x}(x^n \frac{\partial T}{\partial x}) + bT \ln T$
] <td><math>T = -2 \ln u, u = \varphi(x) + \psi(y)</math></td> <td><math>\frac{\partial^2 T}{\partial x^2} + \frac{\partial^2 T}{\partial y^2} = ae^T</math></td>	$T = -2 \ln u, u = \varphi(x) + \psi(y)$	$\frac{\partial^2 T}{\partial x^2} + \frac{\partial^2 T}{\partial y^2} = ae^T$
] <td><math>T = 2 \ln \frac{1+u}{1-u}, u = \varphi(x)\psi(y)</math></td> <td><math>\frac{\partial^2 T}{\partial x^2} + \frac{\partial^2 T}{\partial y^2} = a \sinh T</math></td>	$T = 2 \ln \frac{1+u}{1-u}, u = \varphi(x)\psi(y)$	$\frac{\partial^2 T}{\partial x^2} + \frac{\partial^2 T}{\partial y^2} = a \sinh T$
] <td><math>T = e^u, u = \varphi(x) + \psi(y)</math></td> <td><math>\frac{\partial^2 T}{\partial x^2} + \frac{\partial^2 T}{\partial y^2} = aT \ln T</math></td>	$T = e^u, u = \varphi(x) + \psi(y)$	$\frac{\partial^2 T}{\partial x^2} + \frac{\partial^2 T}{\partial y^2} = aT \ln T$
] <td><math>T = 4a \tan u, u = \varphi(x)\psi(y)</math></td> <td><math>\frac{\partial^2 T}{\partial x^2} + \frac{\partial^2 T}{\partial y^2} = a \sin T</math></td>	$T = 4a \tan u, u = \varphi(x)\psi(y)$	$\frac{\partial^2 T}{\partial x^2} + \frac{\partial^2 T}{\partial y^2} = a \sin T$
] <td><math>T = F(u), u = \varphi(x) + \psi(y)</math></td> <td><math>\frac{\partial}{\partial x}(ax^n \frac{\partial T}{\partial x}) + \frac{\partial}{\partial y}(by^m \frac{\partial T}{\partial y}) = cT^k</math></td>	$T = F(u), u = \varphi(x) + \psi(y)$	$\frac{\partial}{\partial x}(ax^n \frac{\partial T}{\partial x}) + \frac{\partial}{\partial y}(by^m \frac{\partial T}{\partial y}) = cT^k$
] <td><math>T = F(u), u = \varphi(x) + \psi(y)</math></td> <td><math>\frac{\partial}{\partial x}(ae^{\lambda x} \frac{\partial T}{\partial x}) + \frac{\partial}{\partial y}(be^{\beta y} \frac{\partial T}{\partial y}) = ce^{\gamma T}</math></td>	$T = F(u), u = \varphi(x) + \psi(y)$	$\frac{\partial}{\partial x}(ae^{\lambda x} \frac{\partial T}{\partial x}) + \frac{\partial}{\partial y}(be^{\beta y} \frac{\partial T}{\partial y}) = ce^{\gamma T}$
] <td><math>T = F(u), u = \varphi(x) + \psi(y)</math></td> <td><math>\frac{\partial}{\partial x}(ax^n \frac{\partial T}{\partial x}) + \frac{\partial}{\partial y}(be^{\beta y} \frac{\partial T}{\partial y}) = ce^{\gamma T}</math></td>	$T = F(u), u = \varphi(x) + \psi(y)$	$\frac{\partial}{\partial x}(ax^n \frac{\partial T}{\partial x}) + \frac{\partial}{\partial y}(be^{\beta y} \frac{\partial T}{\partial y}) = ce^{\gamma T}$
] <td><math>T = \varphi(x)\psi(y)</math></td> <td><math>\frac{\partial}{\partial x}(aTn \frac{\partial T}{\partial x}) + \frac{\partial}{\partial y}(bT^m \frac{\partial T}{\partial y}) = 0</math></td>	$T = \varphi(x)\psi(y)$	$\frac{\partial}{\partial x}(aTn \frac{\partial T}{\partial x}) + \frac{\partial}{\partial y}(bT^m \frac{\partial T}{\partial y}) = 0$
] <td><math>T = \varphi(x) + \psi(y)</math></td> <td><math>\frac{\partial}{\partial x}(ae^{\lambda T} \frac{\partial T}{\partial x}) + \frac{\partial}{\partial y}(be^{\beta T} \frac{\partial T}{\partial y}) = 0</math></td>	$T = \varphi(x) + \psi(y)$	$\frac{\partial}{\partial x}(ae^{\lambda T} \frac{\partial T}{\partial x}) + \frac{\partial}{\partial y}(be^{\beta T} \frac{\partial T}{\partial y}) = 0$
] <td><math>T = -2 \ln u, u = \varphi(x) + \psi(t)</math></td> <td><math>\frac{\partial^2 T}{\partial t^2} = \frac{\partial^2 T}{\partial x^2} + ae^T</math></td>	$T = -2 \ln u, u = \varphi(x) + \psi(t)$	$\frac{\partial^2 T}{\partial t^2} = \frac{\partial^2 T}{\partial x^2} + ae^T$
] <td><math>T = 2 \ln \frac{1+u}{1-u}, u = \varphi(x)\psi(t)</math></td> <td><math>\frac{\partial^2 T}{\partial t^2} = \frac{\partial^2 T}{\partial x^2} + a \sinh T</math></td>	$T = 2 \ln \frac{1+u}{1-u}, u = \varphi(x)\psi(t)$	$\frac{\partial^2 T}{\partial t^2} = \frac{\partial^2 T}{\partial x^2} + a \sinh T$
] <td><math>T = e^u, u = \varphi(x) + \psi(t)</math></td> <td><math>\frac{\partial^2 T}{\partial t^2} = \frac{\partial^2 T}{\partial x^2} + aT \ln T</math></td>	$T = e^u, u = \varphi(x) + \psi(t)$	$\frac{\partial^2 T}{\partial t^2} = \frac{\partial^2 T}{\partial x^2} + aT \ln T$
] <td><math>T = 4a \tan u, u =</math></td> <td><math>\frac{\partial^2 T}{\partial t^2} = \frac{\partial^2 T}{\partial x^2} + a \sin T</math></td>	$T = 4a \tan u, u =$	$\frac{\partial^2 T}{\partial t^2} = \frac{\partial^2 T}{\partial x^2} + a \sin T$