HP-35s Calculator Program -

SIGHT DISTANCE & ACCELERATION

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	Line	Instruction	Process	User Instruction
South	S001	LBL R	Establishing the library (R goes for Rational Method)	
SOO4 ENTRY SLOPE SOO5 PSE Short Pause Short Pause Soo6 NPUT Input the slope at entry SOO7 EXT SLOPE SOO8 PSE SOO9 NPUT J Input the slope at ext SOO9 SOO9 NPUT J Input the slope at ext SOO9 S	S002	SIGHT DISTANCE	Title	Key in using EQN, RCL S, RCL I, etc
Soop PSE	S003	PSE	Short Pause	
Sour	S004	ENTRY SLOPE		
SOOP EXIT SLOPE	S005	PSE	Short Pause	
SOOT	S006	INPUT I	Input the slope at entry	
S009 INPUT J Input the slope at exit	S007	EXIT SLOPE		
Solid	S008	PSE		
S011	S009	INPUT J	Input the slope at exit	
S012		-	Calculating the grade difference	
SO14		x^2		
SO14				
SO14			Storing the grade difference on variable A	
Sol				
Sol18 EYE LEVEL				
Sol	S016		Viewing the value of grade difference	
Sol				
S020 3.5 Storing default eye level of driver in variable Q S021 INPUT Q Input the eye level of driver (if different from default) S022 INPUT Q Input the eye level of driver (if different from default) S023 OBSTRCT HEIGHT S026 S026 DECELERATION Input the height of an obstruction S027 PSE S028 S028 11.2 S029 S030 INPUT D Input a value of deceleration if other than default 11.2 S031 0.9317 S031 S032 × S033 S033 STO X S034 RCL I S035 0.3 S036 × S037 + S038 1/x S040 PSE S041 INPUT V Input the velocity of the vehicle S042 x² S043 × S045 RCL V S046 × S047 REACTTIME S048 PSE S04				
SO21 STO Q Storing default eye level of driver in variable Q SO22 INPUT Q Input the eye level of driver (if different from default) SO24 PSE SO25 INPUT O Input the height of an obstruction SO26 DECELERATION SO27 SO27 PSE SO28 SO28 11.2 SO29 SO30 INPUT D Input a value of deceleration if other than default 11.2 SO31 0.9317 SO31 SO32 X SO33 SO33 STO X SO34 SO34 RCL I SO35 SO35 0.3 SO36 SO36 X SO37 SO37 + SO39 SO40 PSE SO40 SO41 INPUT V Input the velocity of the vehicle SO42 X*2 SO44 SO45 RCL V SO46 SO46 X SO47 SO47 REACT TIME SO50 SO52 R; </td <td>S019</td> <td></td> <td></td> <td></td>	S019			
Input One of the content				
S023				
SO24			Input the eye level of driver (if different from default)	
SO25 INPUT O				
SO26 DECELERATION SO27 PSE				
SO27 PSE SO28 11.2 SO29 STO D SO30 INPUT D SO31 0.9317 SO32 x SO33 STO X SO34 RCL I SO35 0.3 SO36 x SO37 + SO38 1/x SO39 VELOCITY SO40 PSE SO41 INPUT V Input the velocity of the vehicle SO42 x*2 SO43 x SO44 1.47 SO45 RCL V SO46 x SO47 REACT TIME SO48 PSE SO49 2.5 SO50 STO T SO51 Cix SO52 R _I SO53 INPUT T SO54 x SO55 STO Z SO56 + SO57 STO R S			Input the height of an obstruction	
Soze				
S029 STO D S030 INPUT D S031 0.9317 S032 × S033 STO X S034 RCL I S035 0.3 S036 × S037 + S038 1/x S040 PSE S041 INPUT V INPUT V Input the velocity of the vehicle S042 x^2 S043 x S044 1.47 S045 RCL V S046 x S047 REACT TIME S048 PSE S049 2.5 S050 STO T S051 Clx S052 R _I S053 INPUT T Input the reaction time if other than default 2.5 sec. S054 x S055 STO Z S056 + S057 STO R S058 ENTRY SSD Stopping Sight Distance				
So So So So So So So So				
S031				
S032 X S033 STO X S034 RCL S035 0.3 S036 X S037 + S038 T/X S039 VELOCITY S040 PSE S041 INPUT V Input the velocity of the vehicle S042 X^2 S043 X S044 1.47 S045 RCL V S046 X S047 REACT TIME S048 PSE S049 2.5 S050 STO T S051 Clx S052 R _L S053 INPUT T Input the reaction time if other than default 2.5 sec. S056 X S057 STO R S057 STO R S059 PSE S059 PSE S050 STO T S051 Clx S055 STO Z S056 STO T S056 ENTRY SSD Stopping Sight Distance S059 PSE S060 VIEW R Viewing the Stopping Sight Distance S059 PSE S060 VIEW R Viewing the Stopping Sight Distance S059 STO TO SU50 SU50			Input a value of deceleration if other than default 11.2	
\$033				
S034 RCL		1		
S035 0.3				
S036 x				
S037				
S038 1/x S039 VELOCITY S040 PSE S041 INPUT V S042 x^2 S043 x S044 1.47 S045 RCL V S046 x S047 REACT TIME S048 PSE S049 2.5 S050 STO T S051 Clx S052 R↓ S053 INPUT T Input the reaction time if other than default 2.5 sec. S055 STO Z S056 + S057 STO R S058 ENTRY SSD Stopping Sight Distance S050 VIEW R Viewing the Stopping Sight Distance				
S039				
S040				
SO41	S040			
S042 x^2 S043 × S044 1.47 S045 RCL V S046 × S047 REACT TIME S048 PSE S049 2.5 S050 STO T S051 Clx S052 R↓ S053 INPUT T Input the reaction time if other than default 2.5 sec. S054 × S055 STO Z S056 + S057 STO R S058 ENTRY SSD Stopping Sight Distance S059 PSE S060 VIEW R Viewing the Stopping Sight Distance			Input the velocity of the vehicle	
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S044 1.47 S045 RCL V S046 × S047 REACT TIME S048 PSE S049 2.5 S050 STO T S051 Clx S052 R↓ S053 INPUT T Input the reaction time if other than default 2.5 sec. S054 × S055 STO Z S056 + S057 STO R S058 ENTRY SSD Stopping Sight Distance S059 PSE S060 VIEW R Viewing the Stopping Sight Distance				
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S049 2.5 S050 STO T S051 Clx S052 R↓ S053 INPUT T S054 × S055 STO Z S056 + S057 STO R S058 ENTRY SSD Stopping Sight Distance S059 PSE S060 VIEW R Viewing the Stopping Sight Distance	S048	PSE		
S050 STO T S051 Clx S052 R↓ S053 INPUT T S054 × S055 STO Z S056 + S057 STO R S058 ENTRY SSD Stopping Sight Distance S059 PSE S060 VIEW R Viewing the Stopping Sight Distance	S049	2.5		
S052 R↓ Input the reaction time if other than default 2.5 sec. S053 INPUT T Input the reaction time if other than default 2.5 sec. S054 × S055 S055 STO Z S056 S056 + S057 STO R S058 ENTRY SSD Stopping Sight Distance S059 PSE S060 VIEW R Viewing the Stopping Sight Distance	S050	STO T		
S052 R↓ Input the reaction time if other than default 2.5 sec. S053 INPUT T Input the reaction time if other than default 2.5 sec. S054 × S055 S055 STO Z S056 S056 + S057 STO R S058 ENTRY SSD Stopping Sight Distance S059 PSE S060 VIEW R Viewing the Stopping Sight Distance	S051	Clx		
S054 × S055 STO Z S056 + S057 STO R S058 ENTRY SSD Stopping Sight Distance S059 PSE S060 VIEW R Viewing the Stopping Sight Distance	S052	R↓		
S055 STO Z S056 + S057 STO R S058 ENTRY SSD Stopping Sight Distance S059 PSE S060 VIEW R Viewing the Stopping Sight Distance	S053	INPUT T	Input the reaction time if other than default 2.5 sec.	
S056 + S057 STO R S058 ENTRY SSD Stopping Sight Distance S059 PSE S060 VIEW R Viewing the Stopping Sight Distance				
S057 STO R S058 ENTRY SSD Stopping Sight Distance S059 PSE S060 VIEW R Viewing the Stopping Sight Distance	S055			
S058 ENTRY SSD Stopping Sight Distance S059 PSE S060 VIEW R Viewing the Stopping Sight Distance	S056			
S059 PSE S060 VIEW R Viewing the Stopping Sight Distance				
S060 VIEW R Viewing the Stopping Sight Distance	S058		Stopping Sight Distance	
	S059			
S061 RCL J			Viewing the Stopping Sight Distance	
	S061	RCL J		

12/13/2014		Program for HP35s Calculator	ŀ
S062	0.3		
S063	×		
S064	RCL X		
S065	+		
5005			
S066	1/x		
S067	RCL V		
S068	x^2		
S069	×		
S070	RCL Z		
S071	+		
S072	STO E		
S073	EXIT SSD		
S073	PSE		
5074			
S075	VIEW E	Viewing the Exit Stopping Sight Distance	
S076	RCL V		
S077	x^2		
S078	RCL X		
S079	÷		
S080	RCL Z		
S081	+		
S082	STO S		
S083	SSD ON FLAT		
SU83	SOU ON FLAI		
S084	PSE		
S085	VIEW S	Viewing the Stopping Sight Distance on 0% slope	
S086	RCL I		
S087	RCL J		
S088	x≥y?		
S089	GŔTO S137		
S090	CREST CURVE		
S091	PSE		
S091			
5092	IS IT PASSING		
S093	PSE		
S094	INPUT Y	1 if Yes, 0 if No	
S095	x=0?		
S096	GTO S114		
S097	RCLA		
S098	INPUT S		
S099	x^2		
S100	2800		
5100			
S101	÷		
S102	STO L		
S103	RCL S		
S104	x≤y?		
S105	GTO S208		
S106	2		
S107	×		
S107	2800		
S108	RCL A		
S110	÷		
S111	-		
S112	STO L		
S113	GTO S208		
S114	IS IT STOPPING		
S115	PSE		
S116	INPUT Y	1 if Yes, 0 if No	
S117	x=0?	1.1.100, 0.11110	
S117 S118	GTO S092		
S119	RCL S		
S120	x^2		
S121	RCLA		
S122	×		
S123	2158		
S124	÷		
S125	STO L		
S125	RCL S		
S127	x≤y?		
S128	GTO S208		
S129	2		
S130	×		
	•	•	•

12/13/2014		Program for HP35s Calculator	ŀ
S131	2158		
S132	RCL A		
S133	÷		
S134			
S135	STO L		
S136	GTO S208		
0100	G10 5206		
S137	SAG CURVE		
S138	PSE		
S139	OVHEAD OBSTACL		
S140	PSE		
S141	INPUT C	Input 1 if there is an overhead obstacle, 0 if no obstacle	
S142	x=0?		
S143	GTO S179		
S144	RCL Q		
S145	RCL O		
S145	+		
S140			
5147	2		
S148	÷		
S149	+/-		
S150	+		
S151	STO M		
S152	800		
S153	x		
S154	1/x		
S155	RCL A		
S156	x		
S150	IS SIGHT GIVEN		
0157	DOE		
S158	PSE		
S159	INPUT S	Input the value of sight	
S160	x^2		
S161	×		
S162	STO L		
S163	RCL S		
S164	x≤y?		
S165	GTO S208		
S166	RCL M		
S167	800		
S168	×		
0100			
S169	RCLA		
S170	÷		
S171	+/-		
S172	RCL S		
S173	2		
S174	×		
S175	+		
S176	STO L		
S177	STOP		
S178	GTO S208		
S179	RCL A		
S179	RCL V		
S180	x^2		
0101	x ×		
S182			
S183	3.5		
S184	RCL V		
S185	×		
S186	400		
S187	+		
S188	1/x		
S189	×		
S190	STO L		
S190	STOP		
S191	RCLS		
S193	x≤y?		
S194	GTO S208		
S195	2		
S196	×		
S197	3.5		
S198	RCL V		
S199	x		
2.00	L	I	

12/13/2014		Program for HP35s Calculator	P
S200	400		
S201	+		
S202	RCLA		
S203	÷		
S204	+/-		
S205	+		
S206	STO L		
S207	STOP		
S208	LENGTH OF CURVE		
S209	PSE		
S210	VIEW L	Viewing the length of the curve	
S210	STOP	viewing the length of the curve	
S211	3.75		
S212 S213	STO H		
5213			
S214	INPUT I		
S215	INPUT J		
S216	-		
S217	x^2		
S218	√x		
S219	1/x		
S220	RCL H		
S221	×		
S222	INPUT L		
S223	×		
S224	8		
S225	×		
S226	√x		
S227	10		
S228	×		
S229	STO S		
S230	RCL L		
S231	x≥y?		
S232	GŤO S248		
S233	RCL I		
S234	RCL J		
S235	-		
S236	x^2		
S237	√x		
S238	1/x		
S239	4		
S240	×		
S241	RCL H		
S241	x		
S242	RCL L		
S243	2		
S244 S245	÷		
S245 S246	+		
S240 S247			
S247	STO S S DIST		
S248			
S249	PSE	Missain Cinkt Distance and the C	
S250 S251	VIEW S	Viewing Sight Distance under obstruction	
5251	STOP		
S252	RTN		