Log of Andes session begun Friday, July 27, 2007 14:29:38 by bobh on BOBH
Version 1
Help-flags 01f Procedural Conceptual Example
0:00 Andes-Version 11.1.0.2
0:00 FBD-Version 07 12 07 21:37
0:00 Async-mode 0
0:01 START-HELP "C:\AndesOLI\Andes2.exe"
0:02 DDE-POST (set-session-id "08efdd9f80020c69017901f852d716a5-Jul27-14-29-38")
0:02 DDE (read-student-info "08efdd9f80020c69017901f852d716a5" 1)
0:02 DDE-COMMAND set-score 0
0:02 DDE-RESULT |T|
0:02 DDE-POST (set-condition none)
0:02 DDE (read-problem-info "S2E" 0 0)
0:07 DDE-RESULT |T|
0:07 Check-Entries 1
0:07 DDE-POST (Check-Entries T)
0:07 DDE (define-variable "g" |NIL| |gravitational-acceleration| |earth| |NIL| |NIL| Var-666 "9.8 m/s^2")
0:07 DDE-RESULT |T|
0:07 DDE (define-variable "g" |NIL| |gravitational-acceleration| |earth| |NIL| |NIL| Var-666 "9.8 m/s^2")
0:08 DDE-RESULT |T|
0:08 DDE-POST (Check-Entries NIL)
0:08 Check-Entries 0
0:08 Var-Entry gravitational-acceleration g Var-666 1 _ gravitational#acceleration earth _ _ gravitational#acceleration#at#surface#of#earth 9.8#m/s^2
0:08 Next-Id 667
0:08 DDE-POST (set-stats (NSH_BO_Call_Count 0) (WWH_BO_Call_Count 0) (Correct_Entries_V_Entries (0 0)) (Correct_Answer_Entries_V_Answer_Entries (0 0)))
0:37 Select-tool 50002
0:40 L 241 333 241 333
0:40 Begin-draw 50002 System-667 241 333
0:40 M 241 333
0:40 Up 241 333 241 333
0:40 System System-667 229 321 253 345
0:40 System-dlg System-667 ||
0:40 F bodies
0:43 SEL-LIST bodies 0 ball
0:45 F name
0:47 c name b
0:48 c name ball
0:50 BTN-CLICK 1 OK
0:50 DDE (assert-object "ball" ball |NIL| System-667 241 333)
0:50 DDE-COMMAND assoc step (BODY BALL)
0:50 DDE-COMMAND assoc op DRAW-BODY
0:50 DDE-COMMAND set-score 15
0:50 DDE-RESULT |T|
0:50 Sysprops System-667 name |ball| type 0 time || bodies |ball|
0:52 L 238 332 238 332
0:52 M 215 338
0:53 M 225 345
0:53 Up 225 345 225 345
0:56 Select-tool 50001

0:59 L 227 342 227 342
0:59 Begin-draw 50001 Axes-668 227 342
0:59 M 247 342
1:00 M 313 342
1:01 M 296 342
1:02 M 295 342
1:03 Up 295 342 295 342
1:03 Axes Axes-668 227 342 295 342
1:03 Axes-dlg Axes-668 ||
1:03 F dir
1:09 BTN-CLICK 1 OK
1:09 DDE (assert-x-axis NIL 0 Axes-668 "x" "y" "z")
1:09 DDE-COMMAND assoc step (DRAW-AXES 0)
1:09 DDE-COMMAND assoc op DRAW-UNROTATED-AXES
1:09 DDE-COMMAND set-score 25
1:09 DDE-RESULT |T|
1:09 Axesprops Axes-668 dir 0
1:14 L 225 337 225 337
1:14 Begin-move System-667 |ball| 225 337 0
1:14 Select System-667 |ball|
1:15 M 219 349
1:15 Up 219 349 219 349
1:16 L 242 338 242 338
1:16 Begin-move Axes-668 || 242 338 0
1:16 M 238 348
1:17 M 236 354
1:18 Up 236 354 236 354
1:19 L 350 320 350 320
1:19 M 350 320
1:19 Up 350 320 350 320
1:42 New-Variable mass
1:42 Declare-Variable-dlg
1:42 F body
1:48 F value
1:51 C value 2.0
1:52 C value 2.00
1:54 C value 2.00 kg
1:57 BTN-CLICK 1 OK
1:57 DDE (define-variable "m" |NIL| |mass| |ball| |NIL| |NIL| Var-669 "2.00 kg")
1:57 DDE-COMMAND assoc step (DEFINE-VAR (MASS BALL))
1:57 DDE-COMMAND assoc op DEFINE-MASS
1:58 DDE-COMMAND assoc parse (= m_BALL (DNUM 2.0 kg))
1:58 DDE-COMMAND set-score 40
1:58 DDE-RESULT |T|
2:20 Select-tool 45000
2:25 L 217 354 217 354
2:25 Begin-vector 0 Vector-670 217 354
2:25 M 209 345
2:26 M 198 329
2:28 M 182 313
2:29 M 177 310
2:30 Up 177 310 177 310
2:30 Vector Vector-670 217 354 177 310

2:30 Vector-dlg Vector-670 ||
2:30 F body
2:32 Mv-dlg 401 329 V 370 233 F 401 265
2:33 Mv-dlg 364 279 V 333 183 F 364 215
2:39 F agent
2:39 DRP agent
2:41 CLOSE agent wall1
2:41 SEL agent 1 wall1
2:44 F type
2:44 DRP type
2:48 CLOSE type Normal
2:48 SEL type 4 Normal
3:02 F dir
3:03 C dir 12
3:04 C dir 120
3:06 F name
3:08 c name Fw
3:09 c name Fwall
3:10 c name Fwall1
3:18 BTN-CLICK 1 OK
3:18 DDE (lookup-force "Fwall1" |Normal| |ball| wall1 120 59 |T0| Vector-670)
3:18 DDE-COMMAND assoc step (VECTOR (FORCE BALL WALL1 NORMAL :TIME 1) (DNUM 120 deg))
3:18 DDE-COMMAND assoc op DRAW-NORMAL
3:18 DDE-RESULT |T|
3:18 Forceprops Vector-670 name |Fwall1| type |Normal| body |ball| agent |wall1| dir 120 time |T0|
3:29 Select-tool 45000
3:33 L 223 350 223 350
3:33 Begin-vector 0 Vector-671 223 350
3:33 M 223 350
3:34 M 261 331
3:35 M 276 308
3:37 Up 276 308 276 308
3:37 Vector Vector-671 223 350 276 308
3:37 Vector-dlg Vector-671 ||
3:37 F body
3:40 F agent
3:40 DRP agent
3:45 CLOSE agent wall2
3:45 SEL agent 2 wall2
3:47 F type
3:47 DRP type
3:52 CLOSE type Normal
3:52 SEL type 4 Normal
4:03 F dir
4:04 C dir 4
4:05 C dir 40
4:09 F name
4:10 c name Fw
4:11 c name Fwall2
4:21 BTN-CLICK 1 OK
4:21 DDE (lookup-force "Fwall2" |Normal| |ball| wall2 40 67 |T0| Vector-671)

4:21 DDE-COMMAND assoc step (VECTOR (FORCE BALL WALL2 NORMAL :TIME 1) (DNUM 40 deg))
4:21 DDE-COMMAND assoc op DRAW-NORMAL
4:21 DDE-RESULT |T|
4:21 Forceprops Vector-671 name |Fwall2| type |Normal| body |ball| agent |wall2| dir 40 time |T0|
4:31 Select-tool 45000
4:39 L 220 364 220 364
4:39 Begin-vector 0 Vector-672 220 364
4:39 M 220 388
4:40 M 220 412
4:41 Up 220 412 220 412
4:41 Vector Vector-672 220 364 220 412
4:41 Vector-dlg Vector-672 ||
4:41 F body
4:44 F agent
4:44 DRP agent
4:45 CLOSE agent earth
4:45 SEL agent 3 earth
4:46 F type
4:46 DRP type
4:50 CLOSE type Weight
4:50 SEL type 10 Weight
4:57 F name
5:00 c name Fear
5:01 c name Fearth
5:09 BTN-CLICK 1 OK
5:09 DDE (lookup-force "Fearth" |grav| |ball| earth 270 48 |T0| Vector-672)
5:09 DDE-COMMAND assoc step (VECTOR (FORCE BALL EARTH WEIGHT :TIME 1) (DNUM 270 deg))
5:09 DDE-COMMAND assoc op DRAW-WEIGHT
5:09 DDE-RESULT |T|
5:09 Forceprops Vector-672 name |Fearth| type |Weight| body |ball| agent |earth| dir 270 time |T0|
5:26 EQ-F 0
5:37 E 0 Fw
5:38 E 0 Fwall
5:39 E 0 Fwall1
5:41 E 0 Fwall1 =
5:50 E 0 Fwall1
5:51 E 0 Fwall1_
5:53 E 0 Fwall1_x =
5:54 E 0 Fwall1_x =
5:55 E 0 Fwall1_x = F
5:56 E 0 Fwall1_x = Fwal
5:57 E 0 Fwall1_x = Fwall1
5:59 E 0 Fwall1_x = Fwall1 *
6:00 E 0 Fwall1_x = Fwall1 * cos
6:01 E 0 Fwall1_x = Fwall1 * cos
6:02 E 0 Fwall1_x = Fwall1 * cos ()
6:08 EQ-F 0
6:09 EQ-F 0
6:10 EQ-F 0
6:13 E 0 Fwall1_x = Fwall1 * cos ($qF)

6:14 E 0 Fwall1_x = Fwall1 * cos ($qFw)
6:15 E 0 Fwall1_x = Fwall1 * cos ($qFwall)
6:16 E 0 Fwall1_x = Fwall1 * cos ($qFwall1)
6:25 EQ-SUBMIT 0
6:25 DDE (lookup-eqn-string "Fwall1_x = Fwall1 * cos ($qFwall1)" 0)
6:25 DDE-COMMAND assoc parse (= Xc_Fn_BALL_WALL1_1_0 (* Fn_BALL_WALL1_1 (COS OFn_BALL_WALL1_1)))
6:25 DDE-COMMAND assoc step (EQN (= Xc_Fn_BALL_WALL1_1_0 (* Fn_BALL_WALL1_1 (COS (- (DNUM 120 deg) (DNUM 0 deg))))),(IMPLICIT-EQN (= OFn_BALL_WALL1_1 (DNUM 120 deg)))
6:25 DDE-COMMAND assoc op COMPO-GENERAL-CASE,WRITE-IMPLICIT-EQN
6:25 EQ-F 0
6:25 DDE-RESULT |T|
6:25 EQ-F 1
6:28 E 1 F
6:29 E 1 Fwall
6:30 E 1 Fwall_
6:31 E 1 Fwall_y
6:32 E 1 Fwall_y =
6:33 E 1 Fwall_y =
6:35 E 1 Fwall1_y =
6:36 E 1 Fwall1_y =
6:37 E 1 Fwall1_y = Fwa
6:38 E 1 Fwall1_y = Fwall
6:39 E 1 Fwall1_y = Fwall1
6:41 E 1 Fwall1_y = Fwall1 *
6:43 E 1 Fwall1_y = Fwall1 * sin
6:44 E 1 Fwall1_y = Fwall1 * sin ()
6:48 EQ-F 1
6:49 EQ-F 1
6:51 E 1 Fwall1_y = Fwall1 * sin ($qFwakk)
6:53 E 1 Fwall1_y = Fwall1 * sin ($qFwa)
6:54 E 1 Fwall1_y = Fwall1 * sin ($qFwall)
6:55 E 1 Fwall1_y = Fwall1 * sin ($qFwall1)
7:01 EQ-SUBMIT 1
7:01 DDE (lookup-eqn-string "Fwall1_y = Fwall1 * sin ($qFwall1) " 1)
7:01 DDE-COMMAND assoc parse (= Yc_Fn_BALL_WALL1_1_0 (* Fn_BALL_WALL1_1 (SIN OFn_BALL_WALL1_1)))
7:01 DDE-COMMAND assoc step (EQN (= Yc_Fn_BALL_WALL1_1_0 (* Fn_BALL_WALL1_1 (SIN (- (DNUM 120 deg) (DNUM 0 deg))))),(IMPLICIT-EQN (= OFn_BALL_WALL1_1 (DNUM 120 deg)))
7:01 DDE-COMMAND assoc op COMPO-GENERAL-CASE,WRITE-IMPLICIT-EQN
7:01 EQ-F 1
7:01 DDE-RESULT |T|
7:01 EQ-F 2
7:12 E 2 Fa
7:13 E 2 Fal
7:14 E 2 Fw
7:15 E 2 Fwall
7:16 E 2 Fwall2_
7:17 E 2 Fwall2_x
7:18 E 2 Fwall2_x =
7:19 E 2 Fwall2_x = Fwa
7:20 E 2 Fwall2_x = Fwall2

7:21 E 2 Fwall2_x = Fwall2 *
7:22 E 2 Fwall2_x = Fwall2 * c
7:23 E 2 Fwall2_x = Fwall2 * cos
7:24 E 2 Fwall2_x = Fwall2 * cos ()
7:27 EQ-F 1
7:30 EQ-F 2
7:33 E 2 Fwall2_x = Fwall2 * cos ($q)
7:34 E 2 Fwall2_x = Fwall2 * cos ($qF)
7:35 E 2 Fwall2_x = Fwall2 * cos ($qFwall)
7:37 E 2 Fwall2_x = Fwall2 * cos ($qFwall2)
7:39 EQ-SUBMIT 2
7:39 DDE (lookup-eqn-string "Fwall2_x = Fwall2 * cos ($qFwall2)" 2)
7:39 DDE-COMMAND assoc parse (= Xc_Fn_BALL_WALL2_1_0 (* Fn_BALL_WALL2_1 (COS OFn_BALL_WALL2_1)))
7:39 DDE-COMMAND assoc step (EQN (= Xc_Fn_BALL_WALL2_1_0 (* Fn_BALL_WALL2_1 (COS (- (DNUM 40 deg) (DNUM 0 deg)))))),(IMPLICIT-EQN (= OFn_BALL_WALL2_1 (DNUM 40 deg)))
7:39 DDE-COMMAND assoc op COMPO-GENERAL-CASE,WRITE-IMPLICIT-EQN
7:39 EQ-F 2
7:39 DDE-RESULT |T|
7:39 EQ-F 3
7:42 EQ-F 2
7:46 EQ-F 3
7:47 E 3 Fwall2_x = Fwall2 * cos ($qFwall2)
7:51 E 3 Fwall2_y = Fwall2 * cos ($qFwall2)
7:56 E 3 Fwall2_y = Fwall2 * sin ($qFwall2)
8:02 EQ-SUBMIT 3
8:02 DDE (lookup-eqn-string "Fwall2_y = Fwall2 * sin ($qFwall2)" 3)
8:02 DDE-COMMAND assoc parse (= Yc_Fn_BALL_WALL2_1_0 (* Fn_BALL_WALL2_1 (SIN OFn_BALL_WALL2_1)))
8:02 DDE-COMMAND assoc step (EQN (= Yc_Fn_BALL_WALL2_1_0 (* Fn_BALL_WALL2_1 (SIN (- (DNUM 40 deg) (DNUM 0 deg)))))),(IMPLICIT-EQN (= OFn_BALL_WALL2_1 (DNUM 40 deg)))
8:02 DDE-COMMAND assoc op COMPO-GENERAL-CASE,WRITE-IMPLICIT-EQN
8:02 EQ-F 3
8:02 DDE-RESULT |T|
8:02 EQ-F 4
8:04 EQ-F 2
8:05 EQ-F 4
8:08 EQ-F 1
8:10 EQ-F 4
8:18 E 4 Fea
8:20 E 4 Fear
8:21 E 4 Fearth
8:22 E 4 Fearth_
8:23 E 4 Fearth_x
8:24 E 4 Fearth_x
8:25 E 4 Fearth_x =
8:33 E 4 Fearth_x = 0
8:37 EQ-SUBMIT 4
8:37 DDE (lookup-eqn-string "Fearth_x = 0" 4)
8:37 DDE-COMMAND assoc parse (= Xc_Fw_BALL_EARTH_1_0 0)
8:37 DDE-COMMAND assoc step (EQN (= Xc_Fw_BALL_EARTH_1_0 0))
8:37 DDE-COMMAND assoc op COMPO-PERPENDICULAR

8:37 EQ-F 4
8:37 DDE-RESULT |T|
8:37 EQ-F 5
8:38 E 5 F
8:39 E 5 Fearth
8:40 E 5 Fearth_
8:41 E 5 Fearth_y
8:43 E 5 Fearth_y =
9:00 E 5 Fearth_y = Fe
9:01 E 5 Fearth_y = Fearth
9:03 E 5 Fearth_y = Fearth_
9:04 E 5 Fearth_y = Fearth_y
9:06 E 5 Fearth_y = Fearth_y *
9:07 E 5 Fearth_y = Fearth_y * sin
9:08 E 5 Fearth_y = Fearth_y * sin ()
9:11 EQ-F 3
9:15 EQ-F 5
9:17 E 5 Fearth_y = Fearth_y * sin ($q)
9:18 EQ-F 3
9:19 EQ-F 5
9:21 E 5 Fearth_y = Fearth_y * sin ($qF)
9:23 E 5 Fearth_y = Fearth_y * sin ($qFearth)
9:31 EQ-SUBMIT 5
9:31 DDE (lookup-eqn-string "Fearth_y = Fearth_y * sin ($qFearth)" 5)
9:31 DDE-COMMAND assoc parse (= Yc_Fw_BALL_EARTH_1_0 (* Yc_Fw_BALL_EARTH_1_0 (SIN OFw_BALL_EARTH_1)))
9:31 DDE-COMMAND assoc error UNDIAGNOSED-EQN-ERROR
9:31 EQ-F 5
9:31 DDE-RESULT |NIL|
9:31 S 5 2
9:43 E 5 Fearth_y = Fearth * sin ($qFearth)
9:50 EQ-SUBMIT 5
9:50 DDE (lookup-eqn-string "Fearth_y = Fearth * sin ($qFearth)" 5)
9:50 DDE-COMMAND assoc parse (= Yc_Fw_BALL_EARTH_1_0 (* Fw_BALL_EARTH_1 (SIN OFw_BALL_EARTH_1)))
9:50 DDE-COMMAND assoc step (EQN (= Yc_Fw_BALL_EARTH_1_0 (- Fw_BALL_EARTH_1)))
9:50 DDE-COMMAND assoc op COMPO-PARALLEL-AXIS
9:50 EQ-F 5
9:50 DDE-RESULT |T|
9:50 EQ-F 6
10:22 Help-Hint
10:22 DDE (Get-Proc-Help)
10:23 DDE-COMMAND assoc (NSH ASK-SOUGHT INIT)
10:23 EQ-F 6
10:23 DDE-RESULT |!show-hint Now that you have stated all of the given information, you should start on the major principles. What quantity is the problem seeking?~Q|
10:23 K 6
10:44 Choose-quant 60001 mag force
10:44 Vector-dlg ||
10:45 F body
10:49 F agent
10:49 DRP agent
10:51 CLOSE agent wall1

10:51 SEL agent 1 wall1
10:52 F type
10:52 DRP type
10:53 CLOSE type Normal
10:53 SEL type 4 Normal
10:57 BTN-CLICK 1 OK
10:57 DDE (handle-student-response #.(wb-quant '(define-variable "F" |Normal| |force| |ball| |T0| |wall1| NIL "") 'mag))
10:57 DDE-COMMAND assoc (NSH ASK-FIRST-PRINCIPLE (MAG (FORCE BALL WALL1 NORMAL :TIME 1)))
10:57 DDE-RESULT |!show-hint Right. What is the first principle application that you would like to work on? Hint: this principle application will usually be one that mentions the sought quantity explicitly. Therefore its equation may contain the sought quantity that the problem seeks.~P|
11:14 PSM-expand 32 32 Newton's Laws
11:14 PSM-select 1 Kinematics
11:17 PSM-expand 32 33 Translational
11:22 PSM-select 34 (nsl ((?axis . x))) F1_x + F2_x + ... = m*a_x Newton's Second Law
11:25 BTN-CLICK 1 OK
11:25 DDE (handle-student-response (nsl ((?axis . x))))
11:25 DDE-COMMAND assoc (OPHINT POINT STRING (ACCEL-AT-REST BALL 1))
11:25 DDE-RESULT |!show-hint Right indeed. Notice that the ball is at rest at T0.~e|
11:34 Hint-Hide
11:37 Select-tool 45002
11:45 L 134 290 134 290
11:45 Begin-vector 2 Vector-673 134 290
11:45 M 134 290
11:45 Up 134 290 134 290
11:45 Vector Vector-673 134 290 134 290
11:45 Vector-dlg Vector-673 ||
11:45 Vtype 2
11:45 F body
11:47 F type
11:47 DRP type
11:48 CLOSE type instantaneous
11:48 SEL type 1 instantaneous
11:51 BTN-CLICK 1 OK
11:51 DDE (lookup-vector "a" instantaneous Acceleration |ball| NIL 0 |T0| Vector-673)
11:51 DDE-COMMAND assoc step (VECTOR (ACCEL BALL :TIME 1) ZERO)
11:51 DDE-COMMAND assoc op ACCEL-AT-REST
11:51 DDE-RESULT |T|
11:51 Vecprops Vector-673 name |a| kind Acceleration type |instantaneous| body |ball| body2 || dir time |T0|
11:52 EQ-F 6
11:59 E 6 F
12:00 E 6 Fwa
12:01 E 6 Fwall1
12:04 E 6 Fwall1_x
12:06 E 6 Fwall1_x
12:07 E 6 Fwall1_x +
12:08 E 6 Fwall1_x + Fwa
12:09 E 6 Fwall1_x + Fwall2
12:10 E 6 Fwall1_x + Fwall2_x
12:11 E 6 Fwall1_x + Fwall2_x +

12:12 E 6 Fwall1_x + Fwall2_x + F
12:13 E 6 Fwall1_x + Fwall2_x + Fwa
12:14 E 6 Fwall1_x + Fwall2_x + Fe
12:15 E 6 Fwall1_x + Fwall2_x + Fearth
12:16 E 6 Fwall1_x + Fwall2_x + Fearth
12:19 E 6 Fwall1_x + Fwall2_x + Fearth_
12:20 E 6 Fwall1_x + Fwall2_x + Fearth_x =
12:21 E 6 Fwall1_x + Fwall2_x + Fearth_x = m
12:22 E 6 Fwall1_x + Fwall2_x + Fearth_x = m *
12:25 E 6 Fwall1_x + Fwall2_x + Fearth_x = m *a
12:30 EQ-SUBMIT 6
12:30 DDE (lookup-eqn-string "Fwall1_x + Fwall2_x + Fearth_x = m *a" 6)
12:30 DDE-COMMAND assoc parse (= (+ (+ Xc_Fn_BALL_WALL1_1_0 Xc_Fn_BALL_WALL2_1_0) Xc_Fw_BALL_EARTH_1_0) (* m_BALL a_BALL_1))
12:30 DDE-COMMAND assoc step (EQN (= (+ Xc_Fw_BALL_EARTH_1_0 Xc_Fn_BALL_WALL2_1_0 Xc_Fn_BALL_WALL1_1_0) 0)),(IMPLICIT-EQN (= a_BALL_1 (DNUM 0 m/s^2)))
12:30 DDE-COMMAND assoc op WRITE-NFL-COMPO,WRITE-IMPLICIT-EQN
12:30 DDE-COMMAND set-score 57
12:30 EQ-F 6
12:30 DDE-RESULT |T|
12:30 EQ-F 7
12:32 E 7 F
12:34 E 7 Fwall
12:36 E 7 Fwall1
12:38 E 7 Fwall1_
12:39 E 7 Fwall1_y
12:40 E 7 Fwall1_y +
12:41 E 7 Fwall1_y + F
12:42 E 7 Fwall1_y + Fwall2
12:43 E 7 Fwall1_y + Fwall2_y
12:45 E 7 Fwall1_y + Fwall2_y +
12:46 E 7 Fwall1_y + Fwall2_y + F
12:47 E 7 Fwall1_y + Fwall2_y + Fearth
12:49 E 7 Fwall1_y + Fwall2_y + Fearth_
12:50 E 7 Fwall1_y + Fwall2_y + Fearth_y
12:51 E 7 Fwall1_y + Fwall2_y + Fearth_y =
12:52 E 7 Fwall1_y + Fwall2_y + Fearth_y = m
12:54 E 7 Fwall1_y + Fwall2_y + Fearth_y = m*a
13:01 EQ-SUBMIT 7
13:01 DDE (lookup-eqn-string "Fwall1_y + Fwall2_y + Fearth_y = m*a" 7)
13:01 DDE-COMMAND assoc parse (= (+ (+ Yc_Fn_BALL_WALL1_1_0 Yc_Fn_BALL_WALL2_1_0) Yc_Fw_BALL_EARTH_1_0) (* m_BALL a_BALL_1))
13:01 DDE-COMMAND assoc step (EQN (= (+ Yc_Fw_BALL_EARTH_1_0 Yc_Fn_BALL_WALL2_1_0 Yc_Fn_BALL_WALL1_1_0) 0)),(IMPLICIT-EQN (= a_BALL_1 (DNUM 0 m/s^2)))
13:01 DDE-COMMAND assoc op WRITE-NFL-COMPO,WRITE-IMPLICIT-EQN
13:01 DDE-COMMAND set-score 75
13:01 EQ-F 7
13:01 DDE-RESULT |T|
13:01 EQ-F 8
13:09 E 8 FF
13:10 E 8 F
13:11 E 8 Fea

13:12 E 8 Fearth
13:14 E 8 Fearth =
13:15 E 8 Fearth =
13:17 E 8 Fearth = m
13:19 E 8 Fearth = m*
13:20 E 8 Fearth = m*g
14:03 E 8 Fearth_y = m*g
14:11 EQ-SUBMIT 8
14:11 DDE (lookup-eqn-string "Fearth_y = m*g" 8)
14:11 DDE-COMMAND assoc parse (= Yc_Fw_BALL_EARTH_1_0 (* m_BALL g_EARTH))
14:11 DDE-COMMAND assoc error MISSING-NEGATION-ON-VECTOR-COMPONENT
14:11 DDE-COMMAND assoc step (EQN (= Fw_BALL_EARTH_1 (* m_BALL g_EARTH))),(EQN (= Yc_Fw_BALL_EARTH_1_0 (- Fw_BALL_EARTH_1)))
14:11 DDE-COMMAND assoc op WT-LAW,COMPO-PARALLEL-AXIS
14:11 DDE-COMMAND set-score 74
14:11 EQ-F 8
14:11 DDE-RESULT |NIL|
14:11 S 8 2
14:20 EQ-Whatswrong 8
14:20 DDE (Why-wrong-equation 8)
14:20 DDE-COMMAND assoc MISSING-NEGATION-ON-VECTOR-COMPONENT
14:20 EQ-F 8
14:20 DDE-RESULT |!show-hint Think about the direction of the weight force on the ball at T0 due to the earth.~e|
14:20 K 8
14:42 Help-Explain
14:42 DDE (Explain-More)
14:42 DDE-RESULT |!show-hint Because the vector is parallel to the Y axis but in the negative direction, the projection equation is Fearth_y = - Fearth so Fearth_y stands for a negative value.~e|
14:48 Hint-Hide
14:50 EQ-F 8
14:51 S 8 0
14:58 EQ-SUBMIT 8
14:58 DDE (lookup-eqn-string "Fearth_y = -m*g" 8)
14:59 DDE-COMMAND assoc parse (= Yc_Fw_BALL_EARTH_1_0 (* (- m_BALL) g_EARTH))
14:59 DDE-COMMAND assoc step (EQN (= Fw_BALL_EARTH_1 (* m_BALL g_EARTH))),(EQN (= Yc_Fw_BALL_EARTH_1_0 (- Fw_BALL_EARTH_1)))
14:59 DDE-COMMAND assoc op WT-LAW,COMPO-PARALLEL-AXIS
14:59 EQ-F 8
14:59 DDE-RESULT |T|
14:59 EQ-F 9
15:05 EQ-SolveFor Fwall1 9
15:05 DDE (solve-for-var "Fwall1" 9)
15:06 K 9
15:06 EQ-F 9
15:06 DDE-RESULT |Fwall1 = 15.24609350323204 N|
15:06 S 9 1
15:08 K 9
15:08 Ans-enter Answer-1
15:09 Ans Answer-1 15
15:11 Ans Answer-1 15.2

15:12 Ans Answer-1 15.2
15:13 Ans-submit Answer-1 15.2
15:13 DDE (check-answer "15.2" Answer-1)
15:13 Ans-exit Answer-1
15:13 DDE-RESULT |NIL!show-hint Forgot to put units on a number.~e|
15:13 Ans-status Answer-1 2
15:18 Help-Explain
15:18 DDE (Explain-More)
15:18 DDE-RESULT |!show-hint This equation is dimensionally inconsistent. When numbers are used in equations, they must include the appropriate units. It looks like one of the numbers you've used is lacking the units.~|
15:25 Hint-Hide
15:26 Ans-enter Answer-1
15:27 Ans Answer-1 15.2
15:27 Ans-status Answer-1 0
15:29 Ans Answer-1 15.2 N
15:29 Ans-submit Answer-1 15.2 N
15:29 DDE (check-answer "15.2 N" Answer-1)
15:29 DDE-COMMAND set-score 97
15:29 Ans-exit Answer-1
15:29 DDE-RESULT |T|
15:29 Ans-status Answer-1 1
15:34 App-deactivate
16:11 App-activate
16:24 CLOSE-APP
16:24 DDE (get-stats persist)
16:24 DDE-RESULT |NSH_BO_Call_Count -0.05 0;WWH_BO_Call_Count -0.05 0;Correct_Entries_V_Entries 0.05 17/19;Correct_Answer_Entries_V_Answer_Entries 0.05 1/2|
16:24 Close
16:24 DDE (close-problem "S2E")
16:24 DDE-COMMAND set-score 0
16:24 DDE-RESULT |T|
16:25 END-LOG