

Clock Problem
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This document gives potential answers to a “clock problem” invented by Richard Lasselle.

Rules

- 1) For each time on a digital clock, use all of the digits in an equation with only one equals sign.
- 2) No extra numbers can be added to the equation, only mathematical symbols or operations (such as +, -, ·, /, √, !, sin, cos, tan, sec, csc, cot, ${}_nP_r$, ${}_nC_r$, and parenthesis).
- 3) Exponents or roots (other than a square root) may only be used if the number written in the symbol appears in the correct order in the time. For example, ${}^3\sqrt{\quad}$ may only be used in a time such as 2:38 ($2=^3\sqrt{(8)}$).
- 4) All numbers in the equation must be in their order on the clock (so, for example, if the time is 2:42, you may not switch the second 2 and 4 to create the following: $2^2=4$).
- 5) The symbol π may not be used (because, if it were allowed, any integer could be created by adding or subtracting π/π one or several times).
- 6) Only an equals sign may be inserted, not \neq , \approx , \leq , \geq , $<$, or $>$.

Note for the below solutions

- (2→1) is short for $\tan(\arcsin(\sqrt{2}))$, which equals 1
 (√(4)→1) is short for $\tan(\arcsin(\sqrt{\sqrt{4}}))$, which equals 1
 (3→.5) is short for $\cos(\arcsin(\sqrt{3}))$, which equals .5
 (.5→1) is short for $\tan(\arcsin(\sqrt{\sec(\arcsin(.5))}))$, which equals 1
 (3→1) is short for $\tan(\arcsin(\sqrt{\sec(\arcsin(\sqrt{3}))}))$, which equals 1
 (1→0) is short for $\sin(\arcsin(1))$, which equals 0
 (2→0) is short for $\sin(\arcsin(\tan(\arcsin(\sqrt{2}))))$, which equals 0
 (√(4)→0) is short for $\sin(\arcsin(\tan(\arcsin(\sqrt{\sqrt{4}}))))$, which equals 0
 (.5→0) is short for $\sin(\arcsin(\tan(\arcsin(\sqrt{\sec(\arcsin(.5))}))$, which equals 0
 (3→0) is short for $\sin(\arcsin(\tan(\arcsin(\sqrt{\sec(\arcsin(\sqrt{3}))}))$, which equals 0
 (1→√(2)) is short for $\sec(\arcsin(1))$, which equals √(2)
 (0→√(2)) is short for $\sec(\arcsin(\cos(0)))$, which equals √(2)

Solutions:

1:00	$1 \cdot 0 = 0$	1:14	$1 = 1^4$	1:28	$1 = (2 \rightarrow 1)^8$	1:42	$1 \cdot \sqrt{4} = 2$
1:01	$1 + 0 = 1$	1:15	$1 = 1^5$	1:29	$1 + 2 = \sqrt{9}$	1:43	$1 + \sqrt{4} = 3$
1:02	$1 + 0! = 2$	1:16	$1 = 1^6$	1:30	$1 = 3^0$	1:44	$1 \cdot 4 = 4$
1:03	$1 = (0!)^3$	1:17	$1 = 1^7$	1:31	$1^3 = 1$	1:45	$1 + 4 = 5$
1:04	$1 + 0! = \sqrt{4}$	1:18	$1 = 1^8$	1:32	$1 = 3 - 2$	1:46	$(-1 + 4)! = 6$
1:05	$1 = (0!)^5$	1:19	$1 = 1^9$	1:33	$1 \cdot 3 = 3$	1:47	$1 = (\sqrt{4} \rightarrow 1)^7$
1:06	$1 = (0!)^6$	1:20	$1 = 2^0$	1:34	$1 + 3 = 4$	1:48	$1 = (\sqrt{4} \rightarrow 1)^8$
1:07	$1 = (0!)^7$	1:21	$1 = 2 - 1$	1:35	$1 - 3! = -5$	1:49	$1 + \sqrt{4} = \sqrt{9}$
1:08	$1 = (0!)^8$	1:22	$1 = 2/2$	1:36	$1 \cdot 3! = 6$	1:50	$1^5 = 0!$
1:09	$1 = (0!)^9$	1:23	$-1 = 2 - 3$	1:37	$1 + 3! = 7$	1:51	$1^5 = 1$
1:10	$1 - 1 = 0$	1:24	$1 \cdot 2 = \sqrt{4}$	1:38	$1 = (.-(-3+8) \rightarrow 1)$	1:52	$1 = 5 \cdot 2$
1:11	$1 \cdot 1 = 1$	1:25	$1 = 2 \cdot .5$	1:39	$1 \cdot 3 = \sqrt{9}$	1:53	$1 + 5 = 3!$
1:12	$1 + 1 = 2$	1:26	$(1 + 2)! = 6$	1:40	$1 = 4^0$	1:54	$1 = 5 - 4$
1:13	$1 = 1^3$	1:27	$1 = (2 \rightarrow 1)^7$	1:41	$1 = \sqrt{4} - 1$	1:55	$1 = 5/5$

1:56	$1+5=6$	2:44	$2=4/(\sqrt{4})$	3:32	$3=\sqrt{3^2}$	5:16	$5+1=6$
1:57	$1=(-(-5+7)\rightarrow 1)$	2:45	$2=.4\cdot 5$	3:33	$3!=3+3$	5:17	$(.5\rightarrow 1)=1^7$
1:58	$1=(\sqrt{(.5\cdot 8)}\rightarrow 1)$	2:46	$2+4=6$	3:34	$3!=3\cdot\sqrt{4}$	5:18	$.5=(\sqrt{1+8})\rightarrow .5$
1:59	$1+5=(\sqrt{9})!$	2:47	$(2\rightarrow 1)=(\sqrt{4})\rightarrow 1^7$	3:35	$3=3!\cdot .5$	5:19	$-5=1-(\sqrt{9})!$
2:00	$2\cdot 0=0$	2:48	$2\cdot 4=8$	3:36	$3+3=6$	5:20	$.5=((2+0!)\rightarrow .5)$
2:01	$2^0=1$	2:49	$2=-4+(\sqrt{9})!$	3:37	$(3\rightarrow 1)=(3\rightarrow 1)^7$	5:21	$.5=((2+1)\rightarrow .5)$
2:02	$2+0=2$	2:50	$2=\sqrt{5-0!}$	3:38	$(3\rightarrow .5)=(-3+8)$	5:22	$5\cdot 2=(2\rightarrow 1)$
2:03	$2+0!=3$	2:51	$2=\sqrt{5-1}$	3:39	$3\cdot 3=9$	5:23	$5=2+3$
2:04	$2=0+\sqrt{4}$	2:52	$(2\rightarrow 1)=.5\cdot 2$	3:40	$3=4-0!$	5:24	$5=2/(.4)$
2:05	$2=\sqrt{-0!+5}$	2:53	$2=5-3$	3:41	$3=4-1$	5:25	$5=\sqrt{25}$
2:06	$(2+0!)!=6$	2:54	$2=.5\cdot 4$	3:42	$3!=4+2$	5:26	$(5-2)!=6$
2:07	$(2\rightarrow 1)=(0!)^7$	2:55	$\sqrt{25}=5$	3:43	$3!=\sqrt{4}\cdot 3$	5:27	$5+2=7$
2:08	$(2\rightarrow 1)=(0!)^8$	2:56	$(-2+5)!=6$	3:44	$3!=4+\sqrt{4}$	5:28	$(.5\rightarrow 1)=(2\rightarrow 1)^8$
2:09	$2+0!=\sqrt{9}$	2:57	$2+5=7$	3:45	$-3=\sqrt{4}-5$	5:29	$5=2+\sqrt{9}$
2:10	$2=1+0!$	2:58	$2=\sqrt{.5\cdot 8}$	3:46	$3\cdot\sqrt{4}=6$	5:30	$.5=\sin(30)$
2:11	$2=1+1$	2:59	$2=5-\sqrt{9}$	3:47	$3+4=7$	5:31	$5=3!-1$
2:12	$2=1\cdot 2$	3:00	$3\cdot 0=0$	3:48	$3!+\sqrt{4}=8$	5:32	$5=3+2$
2:13	$2+1=3$	3:01	$(3\cdot 0)!=1$	3:49	$3!=\sqrt{4}\cdot\sqrt{9}$	5:33	$.5=3/(3!)$
2:14	$2\cdot 1=\sqrt{4}$	3:02	$3-0!=2$	3:50	$3!=5+0!$	5:34	$5=3+\sqrt{4}$
2:15	$2=\sqrt{-1+5}$	3:03	$3-0=3$	3:51	$3!=5+1$	5:35	
2:16	$(2+1)!=6$	3:04	$3=-0!+4$	3:52	$3=5-2$		$(.5\rightarrow)=(3\rightarrow 1)(.5\rightarrow 1)$
2:17	$(2\rightarrow 1)=1^7$	3:05	$\sin(30)=.5$	3:53	$3!\cdot .5=3$		
2:18	$(2\rightarrow 1)=1^8$	3:06	$3!+0=6$	3:54	$3=5-\sqrt{4}$	5:36	$.5=3/6$
2:19	$2+1=\sqrt{9}$	3:07	$3!+0!=7$	3:55	$(3\rightarrow .5)=\sqrt{.5}\cdot\sqrt{.5}$	5:37	$(.5\rightarrow 1)=(3\rightarrow 1)^7$
2:20	$2=2+0$	3:08	$3=\sqrt{0!+8}$	3:56	$3=.5\cdot 6$	5:38	$5+3=8$
2:21	$2=2\cdot 1$	3:09	$3+0=\sqrt{9}$	3:57	$(3\rightarrow 1)=(.5\rightarrow 1)^7$	5:39	$.5=3/((\sqrt{9})!)$
2:22	$2=\sqrt{2}\cdot\sqrt{2}$	3:10	$((3-1)\rightarrow 1)=0!$	3:58	$3+5=8$	5:40	$5=4+0!$
2:23	$2=\sqrt{-2+3!}$	3:11	$((3-1)\rightarrow 1)=1$	3:59	$3!\cdot .5=\sqrt{9}$	5:41	$5=4+1$
2:24	$2+2=4$	3:12	$3=1+2$	4:00 to 4:59	are the same as	5:42	$5\cdot 4=2$
2:25	$(2\rightarrow 1)=2\cdot .5$	3:13	$3\cdot 1=3$		2:00 to 2:59, as $\sqrt{4}=2$	5:43	$5=\sqrt{4}+3$
2:26	$2=\sqrt{-2+6}$	3:14	$3+1=4$	5:00	$5\cdot 0=0$	5:44	$5\cdot 4=\sqrt{4}$
2:27	$(2\rightarrow 1)=(2\rightarrow 1)^7$	3:15	$3!=1+5$	5:01	$5^0=1$	5:45	$.5=(\sqrt{4+5})\rightarrow .5$
2:28	$2\cdot\sqrt{2}=\sqrt{8}$	3:16	$3!\cdot 1=6$	5:02	$.5=(0!)/2$	5:46	
2:29	$(2\rightarrow 1)+2=\sqrt{9}$	3:17	$3!+1=7$	5:03	$5+0!=3!$		$((.5\rightarrow 1)+\sqrt{4})!=6$
2:30	$2=3-0!$	3:18	$3=\sqrt{1+8}$	5:04	$5=0!+4$	5:47	
2:31	$2=3-1$	3:19	$3\cdot 1=\sqrt{9}$	5:05	$5+0=5$		$(.5\rightarrow 1)=(\sqrt{4})\rightarrow 1^7$
2:32	$2=3-(2\rightarrow 1)$	3:20	$3=2+0!$	5:06	$5+0!=6$	5:48	
2:33	$2=(3!)/3$	3:21	$3=2+1$	5:07	$(.5\rightarrow 1)=(0!)^7$		$(.5\rightarrow 1)=(\sqrt{4})\rightarrow 1^8$
2:34	$2=3!-4$	3:22	$3-2=(2\rightarrow 1)$	5:08	$.5=(\sqrt{0!+8})\rightarrow .5$	5:49	$5+4=9$
2:35	$2+3=5$	3:23	$3!=2\cdot 3$	5:09	$5+0!=\sqrt{9}!$	5:50	$5=5+0$
2:36	$2\cdot 3=6$	3:24	$3-2=(\sqrt{4})\rightarrow 1$	5:10	$\sqrt{(\sqrt{5-1})}=\sec(\arctan(0!))$	5:51	$5=5\cdot 1$
2:37	$2=\sqrt{-3+7}$	3:25	$3+2=5$			5:52	$(.5\rightarrow 1)=5\cdot 2$
2:38	$2=\sqrt[3]{8}$	3:26	$3\cdot 2=6$	5:11	$\sqrt{(\sqrt{5-1})}=\sec(\arctan(1))$	5:53	$(.5\rightarrow 1)=(.5\rightarrow 1)^3$
2:39	$2=(3!)/(\sqrt{9})$	3:27	$3=\sqrt{2+7}$			5:54	$(.5\rightarrow 1)=(.5\rightarrow 1)^4$
2:40	$2=\sqrt{4+0}$	3:28	$3!+2=8$	5:12	$.5=1/2$	5:55	$5=\sqrt{5}\cdot\sqrt{5}$
2:41	$2=\sqrt{4\cdot 1}$	3:29	$3^2=9$	5:13	$-5=1-3!$	5:56	$(.5\rightarrow 1)=(.5\rightarrow 1)^6$
2:42	$2=4-2$	3:30	$3=3+0$	5:14	$5-1=4$	5:57	$(.5\rightarrow 1)=(.5\rightarrow 1)^7$
2:43	$2+4=3!$	3:31	$3=3^1$	5:15	$5\cdot 1=5$	5:58	$(.5\rightarrow 1)=(.5\rightarrow 1)^8$

5:59	$(.5 \rightarrow 1) = (.5 \rightarrow 1)^9$	6:48	$6 + \sqrt{4} = 8$	7:29	$7 \cdot (2 \rightarrow 0) = (\sqrt{9}) \rightarrow 0$	8:15	$8 \cdot (1 \rightarrow 0) = (.5 \rightarrow 0)$
6:00	$6 \cdot 0 = 0$	6:49	$6 = \sqrt{4} \cdot \sqrt{9}$	7:30	$7 = 3! + 0!$	8:16	$(\sqrt{8+1})! = 6$
6:01	$(6 \cdot 0)! = 1$	6:50	$6 = 5 + 0!$	7:31	$7 = 3! + 1$	8:17	$8 = 1 + 7$
6:02	$6 = (0! + 2)!$	6:51	$6 = 5 + 1$	7:32	$7 = 3! + (2 \rightarrow 1)$	8:18	$8 \cdot 1 = 8$
6:03	$6 = 0 + 3!$	6:52	$6 = (5 - 2)!$	7:33	$7 = 3! + (3 \rightarrow 1)$	8:19	$8 + 1 = 9$
6:04	$6 = (-0! + 4)!$	6:53	$6 \cdot 5 = 3$	7:34	$7 = 3 + 4$	8:20	$8 \cdot (2 \rightarrow 0) = 0$
6:05	$6 = 0! + 5$	6:54	$6 = 5 + (\sqrt{4}) \rightarrow$	7:35	$7 = 3! + (.5 \rightarrow 1)$	8:21	$8 \cdot (2 \rightarrow 0) = (1 \rightarrow 0)$
6:06	$6 = 0 + 6$	6:55	$6 = 5 + (.5 \rightarrow 1)$	7:36	$7 = (3 \rightarrow 1) + 6$	8:22	$\sqrt{8} = 2 \cdot \sqrt{2}$
6:07	$6 = -0! + 7$	6:56	$6 = (.5 \rightarrow 0) + 6$	7:37	$7 \cdot (3 \rightarrow 1) = 7$	8:23	$8 = 2 + 3!$
6:08	$6 = (\sqrt{0! + 8})!$	6:57	$6 = -(.5 \rightarrow 1) + 7$	7:38	$7 + (3 \rightarrow 1) = 8$	8:24	$8 = 2 \cdot 4$
6:10	$6 \cdot (1 \rightarrow 0) = 0$	6:58	$6 = (-5 + 8)!$	7:39	$7 \cdot (3 \rightarrow 0) = (\sqrt{9}) \rightarrow 0$	8:25	$8 \cdot (2 \rightarrow 0) = (.5 \rightarrow 0)$
6:11	$(6 \cdot (1 \rightarrow 0))! = 1$	6:59	$6 \cdot 5 = \sqrt{9}$	7:40	$7 \cdot (\sqrt{4}) \rightarrow 0 = 0$	8:26	$8 = 2 + 6$
6:12	$6 = (1 + 2)!$	7:00	$7 \cdot 0 = 0$	7:41	$(7 \cdot (\sqrt{4}) \rightarrow 0)! = 1$	8:27	$8 = (2 \rightarrow 1) + 7$
6:13	$6 = (1 \cdot 3)!$	7:01	$(7 \cdot 0)! = 1$	7:42	$(7 \cdot (\sqrt{4}) \rightarrow 0)! = (2 \rightarrow 1)$	8:28	$8 = (2 \rightarrow 0) + 8$
6:14	$6 = (-1 + 4)!$	7:02	$7 \cdot 0 = (2 \rightarrow 0)$	7:43	$7 = 4 + 3$	8:29	
6:15	$6 = 1 + 5$	7:03	$7 \cdot 0 = (3 \rightarrow 0)$	7:44			$(\sqrt{8/2}) \rightarrow 1 = (\sqrt{9})$
6:16	$6 = 1 \cdot 6$	7:04	$7 \cdot 0 = (\sqrt{4}) \rightarrow 0$		$(7 \cdot (\sqrt{4}) \rightarrow 0)! = (\sqrt{4}) \rightarrow 1$		$\rightarrow 1)$
6:17	$6 = -1 + 7$	7:05	$7 \cdot 0 = (.5 \rightarrow 0)$)	8:30	$8 \cdot (3 \rightarrow 0) = 0$
6:18	$6 = (\sqrt{1+8})!$	7:06	$7 = 0! + 6$	7:45	$7 - \sqrt{4} = 5$	8:31	$((8 \cdot 3!) \rightarrow 1) = 1$
6:19	$6 = (\sqrt{1 \cdot 9})!$	7:07	$7 + 0 = 7$	7:46	$7 = (\sqrt{4}) \rightarrow 1 + 6$	8:32	$8 = 3! + 2$
6:20	$6 = (2 + 0)!$	7:08	$7 + 0! = 8$	7:47	$7 \cdot (\sqrt{4}) \rightarrow 1 = 7$	8:33	$8 \cdot (3 \rightarrow 0) = (3 \rightarrow 0)$
6:21	$6 = (2 + 1)!$	7:09	$7 - 0! = (\sqrt{9})!$	7:48	$7 + (\sqrt{4}) \rightarrow 1 = 8$	8:34	$8 = 3! + \sqrt{4}$
6:22	$6 = (2 + (2 \rightarrow 1))!$	7:10	$7 \cdot (1 \rightarrow 0) = 0$	7:49	$7 - 4 = \sqrt{9}$	8:35	$8 = 3 + 5$
6:23	$6 = 2 \cdot 3$	7:11	$(7 \cdot (1 \rightarrow 0))! = 1$	7:50	$7 \cdot (.5 \rightarrow 0) = 0$	8:36	$(\sqrt{8 + (3 \rightarrow 1)})! = 6$
6:24	$6 = 2 + 4$	7:12		7:51	$(7 \cdot (.5 \rightarrow 0))! = 1$	8:37	$8 = (3 \rightarrow 1) + 7$
6:25	$6 = (2 \rightarrow 1) + 5$		$(7 \cdot (1 \rightarrow 0))! = (2 \rightarrow 1)$	7:52	$7 = 5 + 2$	8:38	$8 \cdot (3 \rightarrow 1) = 8$
6:26	$6 = (2 \rightarrow 1) \cdot 6$	7:13	$7 - 1 = 3!$	7:53	$7 \cdot (.5 \rightarrow 0) = (3 \rightarrow 0)$	8:39	$8 + (3 \rightarrow 1) = 9$
6:27	$6 = -(2 \rightarrow 1) + 7$	7:14		7:54	$7 = 5 + \sqrt{4}$	8:40	$8 \cdot (\sqrt{4}) \rightarrow 0 = 0$
6:28	$6 = -2 + 8$		$(7 \cdot (1 \rightarrow 0))! = (\sqrt{4}) \rightarrow$	7:55	$7 \cdot (.5 \rightarrow 0) = (.5 \rightarrow 0)$	8:41	$((8/4) \rightarrow 1) = 1$
6:29	$6 = (\sqrt{((2 \rightarrow 1) \cdot 9)})!$		1)	7:56	$7 = (.5 \rightarrow 1) + 6$	8:42	$8/4 = 2$
6:30	$6 = (3 + 0)!$	7:15		7:57	$7 = (.5 \rightarrow 1) \cdot 7$	8:43	
6:31	$6 = (3 \cdot 1)!$		$(7 \cdot (1 \rightarrow 0))! = (.5 \rightarrow 1)$	7:58	$7 + (.5 \rightarrow 1) = 8$		$8 \cdot (\sqrt{4}) \rightarrow 0 = (3 \rightarrow 0)$
6:32	$6 = 3 \cdot 2$	7:16	$7 = 1 + 6$	7:59	$((7 - 5) \rightarrow 1) = (\sqrt{9}) \rightarrow 1$	8:44	$8 = 4 + 4$
6:33	$6 = (\sqrt{3 \cdot 3})!$	7:17	$7 \cdot 1 = 7$	8:00	$8 \cdot 0 = 0$	8:45	$8 = 4 / (.5)$
6:34	$6 = 3 \cdot \sqrt{4}$	7:18	$7 + 1 = 8$	8:01	$(8 \cdot 0)! = 1$	8:46	$8 = \sqrt{4} + 6$
6:35	$6 = (3 \rightarrow 1) + 5$	7:19	$7 - 1 = (\sqrt{9})!$	8:02	$(8 \cdot 0)! = (2 \rightarrow 1)$	8:47	$8 = (\sqrt{4}) \rightarrow 1 + 7$
6:36	$6 = (-3 + 6)!$	7:20	$7 \cdot (2 \rightarrow 0) = 0$	8:03	$\sqrt{8 + 0!} = 3$	8:48	$8 \cdot (\sqrt{4}) \rightarrow 1 = 8$
6:37	$-6 = (3 \rightarrow 1) - 7$	7:21	$(7 \cdot (2 \rightarrow 0))! = 1$	8:04	$\sqrt{8} = (0 \rightarrow \sqrt{2}) \cdot \sqrt{4}$	8:49	$8 + (\sqrt{4}) \rightarrow 1 = 9$
6:38	$6 = (\sqrt{((3 \rightarrow 1) + 8)})!$	7:22		8:05	$8 \cdot 0 = (.5 \rightarrow 0)$	8:50	$8 \cdot (.5 \rightarrow 0) = 0$
6:39	$6 = -3 + 9$		$(7 \cdot (2 \rightarrow 0))! = (2 \rightarrow 1)$	8:06	$(\sqrt{8 + 0!})! = 6$	8:51	$8 \cdot (.5 \rightarrow 0) = (1 \rightarrow 0)$
6:40	$6 = (\sqrt{4} + 0)!$	7:23	$7 - (2 \rightarrow 1) = 3!$	8:07	$8 = 0! + 7$	8:52	$\sqrt{8 \cdot 5} = 2$
6:41	$6 = (\sqrt{4} + 1)!$	7:24		8:08	$8 + 0 = 8$	8:53	$8 = 5 + 3$
6:42	$6 = 4 + 2$		$(7 \cdot (2 \rightarrow 0))! = (\sqrt{4}) \rightarrow$	8:09	$8 + 0! = 9$	8:54	$8 \cdot 5 = 4$
6:43	$6 = \sqrt{4} \cdot 3$		1)	8:10	$8 \cdot (1 \rightarrow 0) = 0$	8:55	
6:44	$6 = 4 + \sqrt{4}$	7:25	$7 = 2 + 5$	8:11	$(8 \cdot (1 \rightarrow 0))! = 1$		$(\sqrt{8 \cdot 5}) \rightarrow 1 = (.5 \rightarrow$
6:45	$6 = (\sqrt{4}) \rightarrow 1 + 5$	7:26	$7 - (2 \rightarrow 1) = 6$	8:12	$\sqrt{8} = (1 \rightarrow \sqrt{2}) \cdot 2$		1)
6:46	$6 \cdot (\sqrt{4}) \rightarrow 1 = 6$	7:27	$7 \cdot (2 \rightarrow 1) = 7$	8:13	$8 \cdot (1 \rightarrow 0) = (3 \rightarrow 0)$	8:56	$(8 - 5)! = 6$
6:47	$6 + (\sqrt{4}) \rightarrow 1 = 7$	7:28	$7 + (2 \rightarrow 1) = 8$	8:14	$\sqrt{8} = (1 \rightarrow \sqrt{2}) \cdot \sqrt{4}$	8:57	$8 = (.5 \rightarrow 1) + 7$

8:58	$8 \cdot (.5 \rightarrow 1) = 8$	10:41	$1+0! = \sqrt{(4)} \cdot 1$	11:28	$\sqrt{(1+1)} \cdot 2 = \sqrt{(8)}$	12:15	$1 \cdot 2 = 1 / (.5)$
8:59	$8 = 5 + \sqrt{(9)}$	10:42	$1+0! = 4/2$	11:29	$1/1+2 = \sqrt{(9)}$	12:16	$1 \cdot 2 = \sqrt{(\sqrt{(16)})}$
9:00 to 9:59	are the same as 3:00 to 3:59, as $\sqrt{(9)} = 3$	10:43	$1+0 = 4-3$	11:30	$1+1 = 3-0!$	12:17	$1+(2+1)! = 7$
10:00	$1^0 = 0^0$	10:44	$1+0 = 4/4$	11:31	$1+1 = 3-1$	12:18	$1 \cdot (2 \rightarrow 1) = 1^8$
10:01	$1+0 = 0+1$	10:45	$1+0! = .4 \cdot 5$	11:32	$1/1 = 3-2$	12:19	$1+2 \cdot 1 = \sqrt{(9)}$
10:02	$1+0! = 0+2$	10:46	$1+0! = -4+6$	11:33	$1/1 = 3/3$	12:20	$1 = 2/2+0$
10:03	$1+0!+0! = 3$	10:47	$1+(0!+\sqrt{(4)})! = 7$	11:34	$1/1+3 = 4$	12:21	$1+2 = 2+1$
10:04	$1+0!+0 = \sqrt{(4)}$	10:48	$(1+0!) \cdot 4 = 8$	11:35	$1+1+3 = 5$	12:22	$1 \cdot 2 = \sqrt{(2 \cdot 2)}$
10:05	$1 \cdot 0 = 0 \cdot 5$	10:49	$-1+0+4 = \sqrt{(9)}$	11:36	$(1+1) \cdot 3 = 6$	12:23	$(1+2)! = 2 \cdot 3$
10:06	$(1+0!+0!)! = 6$	10:50	$1^0 = 5^0$	11:37	$1/1+3! = 7$	12:24	$1 \cdot 2+2 = 4$
10:07	$1 \cdot 0 = 0 \cdot 7$	10:51	$1+0/5 = 1$	11:38	$1+1+3! = 8$	12:25	$1+2+2 = 5$
10:08	$1 = (0^0)^8$	10:52	$1+0 = .5 \cdot 2$	11:39	$1/1 \cdot 3 = \sqrt{(9)}$	12:26	$(-1+2+2)! = 6$
10:09	$1+0!+0! = \sqrt{(9)}$	10:53	$1 = -0!+5-3$	11:40	$1-1 = 4-0$	12:27	$1 = 2 \cdot (-2+7)$
10:10	$1^0 = 1^0$	10:54	$1+0 = 5-4$	11:41	$1 = \sqrt{(1 \cdot 4)} - 1$	12:28	$1 \cdot 2 \cdot \sqrt{(2)} = \sqrt{(8)}$
10:11	$1+0! = 1+1$	10:55	$1+0 = 5/5$	11:42	$1+1 = 4/2$	12:29	$-1+2+2 = \sqrt{(9)}$
10:12	$1+0+1 = 2$	10:56	$1+0+5 = 6$	11:43	$1/1 = 4-3$	12:30	$1+2 = 3+0$
10:13	$1+0!+1 = 3$	10:57	$1+0!+5 = 7$	11:44	$1-1 = 4-4$	12:31	$1 \cdot 2 = 3-1$
10:14	$1+0+1 = \sqrt{(4)}$	10:58	$1+0! = \sqrt{(.5 \cdot 8)}$	11:45	$1+1 = 4 \cdot .5$	12:32	$(1+2)! = 3 \cdot 2$
10:15	$1+0! = 1 / (.5)$	10:59	$1+0! = \sqrt{(-5+9)}$	11:46	$1+1+4 = 6$	12:33	$1+2 = \sqrt{(3)} \cdot \sqrt{(3)}$
10:16	$(1+0!+1)! = 6$	11:00	$1-1 = 0-0$	11:47	$1 = 1^{47}$	12:34	$1-2 = 3-4$
10:17	$1+0 = 1^7$	11:01	$1+1 = 0!+1$	11:48	$(1+1) \cdot 4 = 8$	12:35	$1 \cdot 2+3 = 5$
10:18	$1+0 = 1^8$	11:02	$1+1+0 = 2$	11:49	$1/1+\sqrt{(4)} = \sqrt{(9)}$	12:36	$1 \cdot 2 \cdot 3 = 6$
10:19	$1+0 = 1^9$	11:03	$1+1+0! = 3$	11:50	$(1-1)^5 = 0$	12:37	$1+2 \cdot 3 = 7$
10:20	$-1+0+2 = 1$	11:04	$1+1+0 = \sqrt{(4)}$	11:51	$(1+1) \cdot .5 = 1$	12:38	$1 \cdot 2+3! = 8$
10:21	$1+0 = 2-1$	11:05	$1+1 = \sqrt{(-0!+5)}$	11:52	$1 \cdot 1 / (.5) = 2$	12:39	$(1+2) \cdot 3 = 9$
10:22	$1+0 = 2/2$	11:06	$(1+1+0!)! = 6$	11:53	$1+1 = 5-3$	12:40	$1 \cdot 2 = \sqrt{(4+0)}$
10:23	$1+0+2 = 3$	11:07	$1-1 = 0^7$	11:54	$1/1 = 5-4$	12:41	$\sqrt{(\sqrt{(\sqrt{(12+4))})})} = (1 \rightarrow \sqrt{(2)})$
10:24	$1+0!+2 = 4$	11:08	$1-1 = 0^8$	11:55	$1 \cdot 1 = 5/5$	12:42	$1 \cdot 2 = 4/2$
10:25	$1+0 = .2 \cdot 5$	11:09	$1+1+0! = \sqrt{(9)}$	11:56	$1/1+5 = 6$	12:43	$(1+2)! = \sqrt{(4)} \cdot 3$
10:26	$(1+0+2)! = 6$	11:10	$1+1 = 1+0!$	11:57	$1+1+5 = 7$	12:44	$1 \cdot 2 \cdot \sqrt{(4)} = 4$
10:27	$1+(0!+2)! = 7$	11:11	$1+1 = 1+1$	11:58	$1+1 = \sqrt{(.5 \cdot 8)}$	12:45	$1-2 = 4-5$
10:28	$(1+0!) \cdot \sqrt{(2)} = \sqrt{(8)}$	11:12	$1+1 = 1 \cdot 2$	11:59	$1 = 1^{59}$	12:46	$1 \cdot 2+4 = 6$
10:29	$1+0+2 = \sqrt{(9)}$	11:13	$1+1+1 = 3$	12:00	$1/2 \cdot 0 = 0$	12:47	$1+2+4 = 7$
10:30	$1+0! = 3-0!$	11:14	$1+1 \cdot 1 = \sqrt{(4)}$	12:01	$-1+2+0 = 1$	12:48	$1/2 = 4/8$
10:31	$1+0! = 3-1$	11:15	$1 = 1^{15}$	12:02	$1 \cdot 2 = 0+2$	12:49	$1+2 \cdot 4 = 9$
10:32	$1+0 = 3-2$	11:16	$(1+1+1)! = 6$	12:03	$1+2+0 = 3$	12:50	$1 = 2 \cdot .5+0$
10:33	$1+0 = 3/3$	11:17	$1 = 1^{17}$	12:04	$1+2+0! = 4$	12:51	$1 \cdot 2 \cdot .5 = 1$
10:34	$10 = 3!+4$	11:18	$1 \cdot 1 = 1^8$	12:05	$(1+2)!-0! = 5$	12:52	$1+2 = 5-2$
10:35	$1+0!+3 = 5$	11:19	$1+1+1 = \sqrt{(9)}$	12:06	$(1+2)!+0 = 6$	12:53	$-1 = \sqrt{(25)}-3!$
10:36	$(1+0!) \cdot 3 = 6$	11:20	$1+1 = 2+0$	12:07	$(1+2)!+0! = 7$	12:54	$-1+2 = 5-4$
10:37	$1+0+3! = 7$	11:21	$1+1 = 2 \cdot 1$	12:08	$1 \cdot (2 \rightarrow 0) = 0 \cdot 8$	12:55	$1 \cdot \sqrt{(25)} = 5$
10:38	$1+0!+3! = 8$	11:22	$1/1 = 2/2$	12:09	$1+2+0 = \sqrt{(9)}$	12:56	$(1+2) / (.5) = 6$
10:39	$1-0!+3 = \sqrt{(9)}$	11:23	$-1/1 = 2-3$	12:10	$1-2+1 = 0$	12:57	$1 \cdot 2 = -5+7$
10:40	$1+0! = \sqrt{(4)}+0$	11:24	$(1+1) \cdot 2 = 4$	12:11	$1-2/1 = -1$	12:58	$1 \cdot 2 = \sqrt{(.5 \cdot 8)}$
		11:25	$1/1 = .2 \cdot 5$	12:12	$1+2 = 1+2$	12:59	$(1+2)! \cdot .5 = \sqrt{(9)}$
		11:26	$1 = ((1+2)!)/6$	12:13	$1+2 = 1 \cdot 3$		
		11:27	$1+(1+2)! = 7$	12:14	$1+2+1 = 4$		