1)
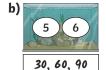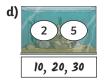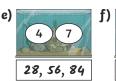
a) The common multiple is 12.

b) Children might suggest 24, 36, 48, 60 or any other common multiple of 4 and 6.

c) 24, 36, 48, 60, 72, 84, 96

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Key:

multiples of 4

multiples of 6

multiples of 4 and 6

2)

a) 3 5 — 15, 30, 45

b) 5 6 — 30, 60, 90

c) 3 7 — 21, 42, 63

d) 2 5 — 10, 20, 30

e) 4 7 — 28, 56, 84

f) 5 8 — 40, 80, 120

Children may also give other common multiples, formed by finding the product of the two numbers and then finding multiples of this product.

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1) Levi is incorrect. If the pair of numbers do not share a common factor (other than 1), such as 4 and 7, then their lowest common multiple is their product, as in this example (28). However, if the pair of numbers do share a common factor, such as 4 and 6 (which have a common factor of 2), then their lowest common multiple is not their product. In this case, their lowest common multiple is 12 and their product is 24.

2)

a) 12, 24 and 36
Accept any pair of numbers from 2, 3, 4, 6 or 12.

b) 15, 30 and 45
Accept any pair of numbers from 3, 5 or 15.

c) 21, 42 and 63
Accept any pair of numbers from 3, 7 or 21.

d) 10, 20 and 30
Accept any pair of numbers from 2, 5 or 10.

e) 18, 27 and 36
3 and 9

f) 36, 72 and 108
Accept any pair of numbers from 2, 3, 4, 6, 9, 12, 18 or 36.

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1) Common multiples of 3 and 5 are 15, 30, 45 and 60. The two gauges will both beep at these times. Therefore, they will both beep at the same time four times in an hour.

2) Common multiples of 12 and 18 are 36, 72, 108, 144, 180, 216, 252, 288, 324 and 360. 360 is equivalent to 6 hours, which is how long the diving sessions last for. Therefore, the reports will come in at the same time 10 times between 7 a.m. and 1 p.m.

These common multiples need converting to times in order to work out when the reports will come in at the same time.

7:36 a.m.	8:48 a.m.	10:00 a.m.	11:12 a.m.	12:24 p.m.
8:12 a.m.	9:24 a.m.	10:36 a.m.	11:48 a.m.	1:00 p.m.