Student Worksheet 1 Solutions
TI-30XB MultiView™: Algebra Rules!

WS1

a) i) 29,400 L

ii) 28,800 L

iii) 25,800 L

b) The amount of water remaining is equal to 30000 L less the product of 600 L and the number of days elapsed

c) 50 days

d) The rule will calculate values, even they may not makes sense in the context (ie the minimum possible value of y is 0 L)

e) From 0 to 50 days inclusive

f) 60 days

g) 30 days

h) $0 = 30{,}000 - Wx$

i) $0 = 30{,}000 - Wx$

$Wx = 30000$

$x = \frac{30000}{W}$

j)

Daily water usage (in L)	400	425	450	475	500	525	550	575
No of days water will last	75	71	67	63	60	57	55	52

k) $0 = 30000 - W(365)$

$365W = 30000$

$W = \frac{30000}{365}$

$W = 82.19$

$W \approx 82$ L/day

Student Worksheet 2 Solutions
TI-30XB MultiView™: Algebra Rules!

WS2

Problem 1

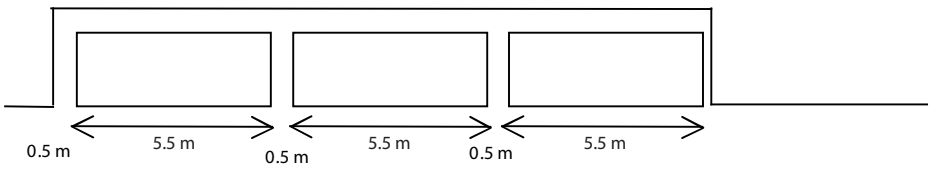
a)

n	1	2	3	4	5	6	7	8	9	10
L	7	12.5	18	23.5	29	34.5	40	45.5	51	56.5

b) 5.5 metres may be the average length of a taxi (with some extra 'buffer' amount included)

c) 1.5 metres may be added to assist getting taxis in and out of the strip

d) Sample diagram:



e) $5.5n + 1.5 = 40$

$5.5n = 40 - 1.5$

$5.5n = 38.5$

$n = \frac{38.5}{5.5}$

$n = 7$

Problem 2

a) $T = 0.25n + 12$

b) \$55.25

c) \$3644

d) 353 messages

e) $0.25n + 12 > 100$

$0.25n > 88$

$n > 352$

So $n = 353$

Problem 3

a) $k = \frac{h}{2} + 2$

b)

h	12	16	20	40
k	8	10	12	22

c) 50 sweets

d) $27 = \frac{h}{2} + 2$

$\frac{h}{2} = 25$

$h = 50$

Student Worksheet 3 Solutions
TI-30XB MultiView™: Algebra Rules!

WS3

a) $P_j = 300 + 50x$

$P_t = 210 + 65x$

b)

x	0	1	2	3
P_j	300	350	400	450
P_t	210	275	340	405

c) As per calculator screen shown

d) Tamara earned $60 more than Jeff

e) 6 computers

f) $300 + 50x = 210 + 65x$

g)
$$\begin{aligned} 300 + 50x &= 210 + 65x \\ 300 - 210 &= 65x - 50x \\ 90 &= 15x \\ x &= \frac{90}{15} \\ x &= 6 \end{aligned}$$

h) To provide a base wage, and then a financial incentive for selling as many computers as possible

i) Answers will vary, based on factors such as risk, likelihood of sales etc.

Student Worksheet 4 Solutions
TI-30XB MultiView™: Algebra Rules!

WS4

Problem 1

a) $y_{Kath} = 80 + 12x$

b) $y_{Kim} = 200 - 18x$

c)

x	0	2	4	6	8
Kath's savings	80	104	128	152	164
Kim's savings	200	164	128	92	74

d) In the 12th week

e) $80 + 12x = 200 - 18x$

f) $80 + 12x = 200 - 18x$
$30x = 120$
$x = 4$

Problem 2

a) $H_t = 7.3 + 1.5x$

b) $H_c = 12.5 + 0.5x$

c) $7.3 + 1.5x = 12.5 + 0.5x$
$1.5x - 0.5x = 12.5 - 7.3$
$x = 5.2$ weeks

d) May happen in the middle of the week

Assessment Task Solutions
TI-30XB MultiView™: Algebra Rules!

ATS

Question 1

a) 8000 L

b) 150 L

c) 6500 L

d) 53.33 days (or sometime on 54th day)

e) $0 = 8000 - 150t$

$t = \frac{8000}{150}$

$t = 53.333...$

$t \approx 54$

Question 2

a) $T = 155 + 0.21x$

b) $276.80

c) $509.69

d) $509.69 = 155 + 0.21x$

$0.21x = 59.69 - 155$

$0.21x = 354.69$

$x = 1689$