1)

3×   6×

3 lots of 3 →(double)→ 18

9 groups of 3 →(double)→ 54

36 ←(halve)← 12 times 6

21 ←(halve)← 7 multiplied by 6

2) a)

5 × 6 = **30**

8 × 60 = **480**

8 × **600** = 4800

8 × 6 = 48

60 × **5** = 300

3 × 600 = **1800**

3 × **6** = 18

3 × 60 = 180

5 × **600** = 3000

b) The facts are related as they are 6× table facts and 6× table facts scaled up to make them either 10 or 100 times bigger (so 60× and 600× table facts). You can still see the original 6× table fact within the 60× and 600× table facts.

E.g.   3 × 6 = 18   3 × 60 = 180   3 × 600 = 1800

3)

48	3	30	22	7200	12	60	440	6600	9	490	36	1	3800	480	54	660
6	64	4200	21	60	37	99	33	120	10	800	6000	2200	106	1800	15	30
24	180	540	93	600	66	81	7	3600	140	17	3000	3500	55	42	3200	540
60	6600	1200	1400	18	6	260	5000	30	3	220	360	4	320	4800	2	2400
600	5	240	39	4200	620	560	35	7200	2800	8	120	380	105	36	27	48
300	88	720	2600	1200	24	12	11	60	720	400	54	420	330	72	600	5400

1)

$480 \div 80 =$ `6` $36 \div 6 =$ `6`   `6` $\times 500 = 3000$ ($6 \times$ `3` $= 18$)

$6 \times 3 = 18$ is the odd one out because the missing number from this calculation is 3. The missing number in all the other calculations is 6.

2) They are all true. None of them are false.

Grace's statement is true. If you take a fact from the 3 times table and double the answer, it will make the answer for the equivalent 6 times table fact. For example: $2 \times 3 = 6$ $2 \times 6 = 12$

Ali's statement is also true because if you take a fact from the 12 times table and halve the answer, it will make the answer for the equivalent fact from the 6 times table. For example: $5 \times 12 = 60$ $5 \times 6 = 30$

Klaus' statement is also true because if you take a fact from the 5 times table and then add the number you multiplied 5 by to the answer, it will make the answer for the equivalent fact from the 6 times table.

For example: $4 \times 5 = 20 \longrightarrow 20 + 4 = 24 \longrightarrow 4 \times 6 = 24$

1) Here are some possible solutions but there are many more. Look for examples of children using and applying their commutative or inverse knowledge to find new calculations.

10×6 or 6×10

2×30 or 30×2

1×60 or 60×1

$2 \times 10 \times 3$ (in any order)

$5 \times 6 \times 2$ (in any order)

$60 \div 1$

$180 \div 3$

$600 \div 10$