

LO: To solve reasoning problems by multiplying 2 digits by 1 digit

### Challenge 1

1a. Tim rowed 32 miles a day for 3 days and Sandy rowed 41 miles for 2 days. Who rowed the furthest?

	3	2
x		3

(3 x 2)      (2 x 1)

	4	1
x		2

(3 x 30)      (2 x 40)

Show your working using the expanded method.



PS

1b. Chris runs 13 miles a day for 3 days and Katie runs 12 miles for 4 days. Who ran the furthest?

	1	3
x		3

(3 x 3)      (4 x 2)

	1	2
x		4

(3 x 10)      (4 x 10)

Show your working using the expanded method.



PS

2a. Find the missing numbers to complete the calculation.

	2	4
x		
		8
	4	0

x		
		0



PS

2b. Find the missing numbers to complete the calculation.

	3	3
x		
		6
	6	0

x		
		0



PS

3a. Caroline has worked out the answer to a calculation.

	2	2
x		4
		8
	8	0
	8	8


Is she correct? Explain your answer.



R

3b. Clint has worked out the answer to a calculation.

	3	3
x		3
		9
		9
	1	8


Is he correct? Explain your answer.



R

## Challenge 2

4a. Tony cycles 32 miles a day for 7 days and Steve cycles 36 miles for 5 days. Who cycled the furthest?

x		
<hr/>		

( x )

x		
<hr/>		

( x )

Show your working using the expanded method.



P5

4b. Carol swims 42 lengths a day for 6 days and Kelvin swims 27 lengths for 8 days. Who swam the furthest?

x		
<hr/>		

( x )

x		
<hr/>		

( x )

Show your working using the expanded method.



P5

5a. Find the missing numbers to complete the calculation.

	2	4
x		
<hr/>		
<hr/>		
	1	

10	1	1
10	1	1
10	1	1
10	1	1
10	1	1
10	1	1
10	1	1



P5

5b. Find the missing numbers to complete the calculation.

	4	6
x		
<hr/>		
<hr/>		
	1	

10	10	1	1	1
10	10	1	1	1
10	10	1	1	1
10	10	1	1	1
10	10	1	1	1
10	10	1	1	1
10	10	1	1	1



P5

6a. Cheryl has worked out the answer to a calculation.

10	10	10	1	1	1	1	1	1
10	10	10	1	1	1	1	1	1
10	10	10	1	1	1	1	1	1
10	10	10	1	1	1	1	1	1

	3	6
x		4
<hr/>		
1	2	4
<hr/>		
	2	

Is she correct? Explain your answer.



P6

6b. Charlie has worked out the answer to a calculation.

10	10	1	1	1	1	1	1	1
10	10	1	1	1	1	1	1	1
10	10	1	1	1	1	1	1	1

	2	7
x		3
<hr/>		
	8	1
<hr/>		
	2	

Is he correct? Explain your answer.



P6

### Challenge 3

7a. Karis skied 36 miles a day for 7 days and Sally skied 43 miles a day for 6 days.

X		

X		

What is the difference between the two totals?



PS

7b. Tara's horse rode 27 miles a day for 6 days and Piers's horse rode 28 miles a day for 5 days.

X		

X		

What is the difference between the two totals?



PS

8a. Use the digit cards to complete the calculation.

3
---

7
---

5
---

9
---

X		
2	3	7
	2	



PS

8b. Use the digit cards to complete the calculation.

2
---

8
---

5
---

6
---

X		
4	3	0
	3	



PS

9a. Kim and Kyle have worked out this calculation.

	3	9
X		4
1	2	6
	3	

	3	9
X		4
1	5	6
	3	

Kim

Kyle

Who is incorrect? Explain their mistake.



R

9b. Crystal and Kang have worked out this calculation.

	4	5
X		7
3	1	5
	3	

	4	5
X		7
3	0	5
	3	

Crystal

Kang

Who is incorrect? Explain their mistake.



R

# Answers

## Developing

1a. Tim rowed 96 miles while Sandy only rowed 82 miles.

2a.

	2	4
x		2
<hr/>		
		8
	4	0
<hr/>		
	4	8

3a. Caroline is correct because  $4 \times 2 = 8$  and  $4 \times 20 = 80$ . 8 and 80 is 88.

## Developing

1b. Katie ran 48 miles while Chris only ran 39 miles.

2b.

	3	3
x		2
<hr/>		
		6
	6	0
<hr/>		
	6	6

3b. Clint is incorrect because he has calculated  $3 \times 3$  instead of  $3 \times 30$ .  $33 \times 3 = 99$  not 18.

## Expected

4a. Tony cycled 224 miles while Steve only rowed 180 miles.

5a.

	2	4
x		3
<hr/>		
	7	2
<hr/>		
	1	

6a. Cheryl is incorrect because she has not remembered to add in her exchange.  $36 \times 4 = 144$  not 124.

## Expected

4b. Carol swam 252 lengths while Kelvin only swam 216 lengths.

5b.

	4	6
x		3
<hr/>		
	1	3
	8	
<hr/>		
	1	

6b. Charlie is correct because  $3 \times 7 = 21$  and  $3 \times 20 = 60$ .  $21 + 60 = 81$ .

## Greater Depth

7a.  $36 \times 7 = 252$ ;  $43 \times 6 = 258$ . The difference is 6.

8a.

	7	9
x		3
<hr/>		
	2	3
	7	
<hr/>		
	2	

9a. Kim is incorrect because she has not added the exchange.

## Greater Depth

7b.  $27 \times 6 = 162$ ;  $28 \times 5 = 140$ . The difference is 22.

8b.

	8	6
X		5
<hr/>		
	4	3
	0	
<hr/>		
	3	

9b. Kang is incorrect because he has added the exchange incorrectly.