Challenge 1
Can you continue the pattern to 100 and describe what is happening?
$7+3$ = 10
$17+3=20$
$27+3=$

## Why does this happen?



Can you make a rule about what happens when you add numbers with 7 ones and numbers with 3 ones?

Challenge 2
$\star$
Can you continue the pattern to 10 and describe what is happening?

100-5 = 95
90-5 =
80-5 =

## Why does this happen?

Can you make a rule about what happens when you subtract a number with 5 ones from a multiple of 10 ?

## Challenge 4

How quickly can you complete these calculations?
95-3 =
35-3 =
85-3 =
25-3 =
75-3 =
15-3 =
65-3 =
5-3 =
55-3 =
45-3 =

## Speed It Up Challenge Cards Answers

> Challenge 1
> $7+3=10$
> $17+3=20$
> $27+3=30$
> $37+3=40$
> $47+3=50$
> $57+3=60$
> $67+3=70$
> $77+3=80$
> $87+3=90$
> $97+3=100$

If I have 7 ones and I add 3 ones, I will always make a multiple of ten because 7 and 3 make 10.

Challenge 2
100-5 =95
90-5 = 85
80-5 = 75
70-5 = 65
$60-5=55$
50-5 $=45$
40-5 = 35
30-5 $=25$
20-5 = 15
$10-5=5$
$5+5=10$ so $10-5=5$
If I take away 5 from any multiple of 10, the answer will always have 5 ones.

Challenge 3
$\mathbf{8 + 2}=10$
$18+2=20$
$28+2=30$
$38+2=40$
$48+2=50$
$58+2=60$
$68+2=70$
$78+2=80$
$88+2=90$
$98+2=100$
I was quick because if I have 8 ones and I add 2 ones, I will always make a multiple of ten because $8+2=10$.

Challenge 4
95-3=92
$85-3=82$
$75-3=72$
$65-3=62$
$55-3=52$
$45-3=42$
$35-3=32$
25-3=22
15-3 = 12
$5-3=2$
I was quick because if I have 5 ones and I subtract 3 ones, the number will always have 2 ones because 5-3 = 2 .

Can you continue the pattern and describe what is happening?
$98-4=68-4=38-4=8-4=$
$88-4=58-4=\quad 28-4=$
$78-4=\quad 48-4=18-4=$
Why does this happen?


Can you make a rule about what happens when you subtract a number with 8 ones from a number with 4 ones?

## Challenge 3

$\star$
How quickly can you complete these calculations?

$$
\begin{array}{lll}
99-6= & 59-6= & 19-6= \\
89-6= & 49-6= & 9-6= \\
79-6= & 39-6= & \\
69-6= & 29-6= &
\end{array}
$$

Were you quick?

## Can you explain why?



How quickly can you complete these calculations?
$2+6=$
$42+6=$
$82+6=$
$12+6=$
$52+6=$
$92+6=$
$22+6=$
$62+6=$
$32+6=$ $72+6=$

Were you quick?
Can you explain why?


## Challenge 4

$\star$
Start at 100 and take away 5 repeatedly until you get to zero. Can you describe the pattern and explain what you notice?

Start at 98 and take away 5 for as long as you can. Can you describe the pattern and explain what you notice?

## Speed It Up Challenge Cards Answers

Challenge 1
$98-4=94$
$88-4=84$
$78-4=74$
$68-4=64$
$58-4=54$
$48-4=44$
$38-4=34$
$28-4=24$
$18-4=14$
$8-4=4$
All of these calculations
subtract 4 ones from
8 ones. I know 8 - $4=4$,
so these answers all have
4 ones.

Challenge 1
98-4 = 94
$88-4=84$
78-4 = 74
$68-4=64$
$58-4=54$
$48-4=44$
$38-4=34$
28-4=24
18-4 = 14
$8-4=4$
All of these calculations subtract 4 ones from 8 ones. I know 8-4 = 4, so these answers all have 4 ones.

Challenge 2
$2+6=8$
$12+6=18$
$22+6=28$
$32+6=38$
$42+6=48$
$52+6=58$
$62+6=68$
$72+6=78$
$82+6=88$
$92+6=98$
There are the same number of ones in each calculation. I know that 2 ones and 6 ones make 8 ones, so the answers will all have 8 ones.

Challenge 3
99-6 = 93
$89-6=83$
79-6 = 73
69-6 = 63
$59-6=53$
49-6 = 43
39-6 = 33
29-6 = 23
$19-6=13$
$9-6=3$
All of these calculations subtract 6 ones from 9 ones. I know that 9-6 = 3, so these answers all have 3 ones.

Challenge 4
100, 95, 90, 85, 80, 75, 70,
$65,60,55,50,45,40,35$,
$30,25,20,15,10,5,0$
I'm starting with a multiple of 5 and subtracting 5, so the pattern follows multiples of 5 .

98, 93, 88, 83, 78, 73, 68,
$63,58,53,48,43,38,33$,
$28,23,18,13,8,3$
I'm not starting on a multiple of 5 but I'm subtracting 5 each time. So instead of multiples of 5, I get a repeating pattern of 8.

## Challenge 1

Take a pack of digit cards. Start at zero and add each number as you turn it over.

## Can you use your number facts to help you?



## Challenge 3

$\star \star \star$
How quickly can you complete these calculations?

$$
3+4=
$$

$13+4=$
$23+4=$

## Continue the pattern.



Make a rule about what you notice. Now, make up one of your own for a friend to try.

## Challenge 2

Take a pack of digit cards. Start at 100 and subtract each number as you turn it over.

## Can you use your number facts to help you?



## Challenge 4

$\boldsymbol{*} \boldsymbol{*}$
How quickly can you complete these calculations?

$$
\begin{aligned}
& 96-5= \\
& 86-5=
\end{aligned}
$$

## Continue the pattern.

Make a rule about what you notice.
What would happen if you subtracted 15 each time? Now make up one of your own.

## Speed It Up Challenge Cards Answers

| Challenge 1 | Challenge 3 |
| :--- | :--- |
| Answers will vary depending <br> on cards chosen. Children <br> should use their number | $3+4=7$ |
| facts correctly. | $23+4=27$ |
| Challenge 2 | $33+4=37$ |
| Answers will vary depending <br> on cards chosen. Children <br> should use their number <br> facts correctly. | $43+4=47$ |
|  | $63+4=67$ |
|  | $73+4=77$ |
|  | $83+4=87$ |
|  | $93+4=97$ |

I was always adding 3 ones to 4 ones, so the answer would always have 7 ones.

Challenge 4
96-5 = 91
$86-5=81$
76-5 = 71
$66-5=61$
56-5 = 51
$46-5=41$
36-5 = 31
26-5 = 21
$16-5=11$
6-5 = 1
If I start with 6 ones and take away 5 ones, my answers will have 1 one.

96-15 = 81
86-15 = 71
76-15 = 61
$66-15=51$
56-15 = 41
46-15 = 31
36-15 = 21
26-15 = 11
16-15=1
The ones have the same pattern, but I take away ten as well.

