Lesson 15 – Number – Subtract a 1 digit from a 2 digit number – crossing ten

NC Objective: Similarly subtraction crossing 10 is recapped before children move onto more formal subtraction.	Resources needed: Differentiated Sheets Teaching Slides	Vocabulary: Subtraction, crossing tens, place value.

Just as with addition, children need to have a strong understanding of place value for subtraction. Children need to be able to count to 20 and need to be able to partition two-digit numbers in order to subtract from them. They need to understand the difference between one-digit and two-digit numbers and line them up in columns. In order to progress to using the number line more efficiently, children need to be secure in their number bonds.

Key Questions:
Are we counting backwards or forwards on the number line? Have we got enough ones to subtract?
Can we exchange a ten for ten ones?
How can we show the takeaway? Can we cross out the cubes?

★ Working Towards	★★ Working Within	★★★ Greater Depth
Children will have their number line started for them. They have a completed number bond shown to help them complete the next calculation. The other subtraction sentence is written for them.	Children will write the second number sentence themselves, having the diagram completed for them. They will complete the bonds.	Children complete the full diagram and will investigate statements.

Reasoning & Problem Solving

Use the number line to help you work out the subtractions.

$20 - 1 =$ _____ $\quad$ $20 - 3 =$ _____ $\quad$ $20 - 5 =$ _____

$20 - 2 =$ _____ $\quad$ $20 - 4 =$ _____ $\quad$ $20 - 6 =$ _____

Use number bonds to work out the subtractions.
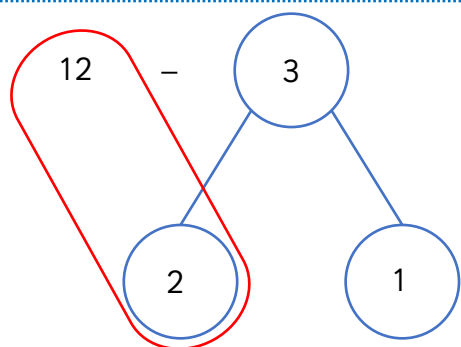
$10 \quad - \quad 1 \quad =$ _____
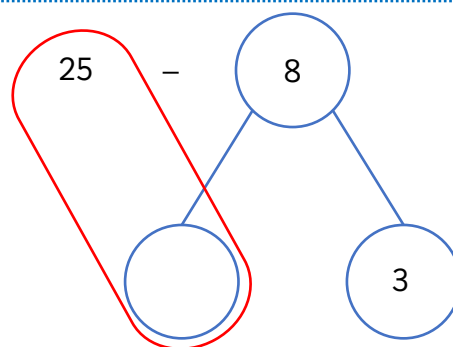
$20 \quad - \quad 3 \quad =$ _____

Work out the subtractions.

$12 - 5 =$ _____ $\quad$ $14 - 9 =$ _____ $\quad$ $25 - 6 =$ _____

$12 - 4 =$ _____ $\quad$ $11 - 3 =$ _____ $\quad$ $31 - 7 =$ _____

What is the difference between the numbers?
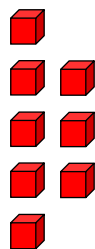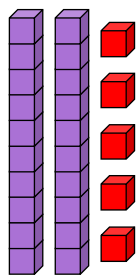
$25 \quad -$ _____ $=$ _____

_____ $-$ _____ $=$ _____
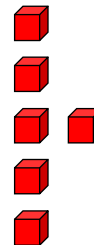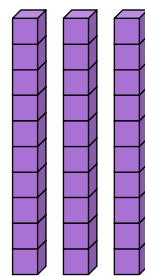
Work out the subtractions.

$27 - 9 =$ ___ $\quad$ $17 - 8 =$ ___ $\quad$ $44 - 6 =$ ___

$33 - 7 =$ ___ $\quad$ $13 - 5 =$ ___ $\quad$ $13 - 7 =$ ___

Use the number line to help you work out the subtractions.
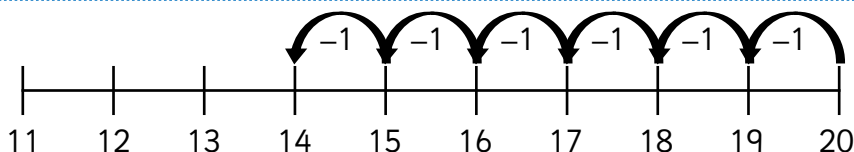
20 – 1 = __19__   20 – 3 = __17__   20 – 5 = __15__

20 – 2 = __18__   20 – 4 = __16__   20 – 6 = __14__

Use number bonds to work out the subtractions.
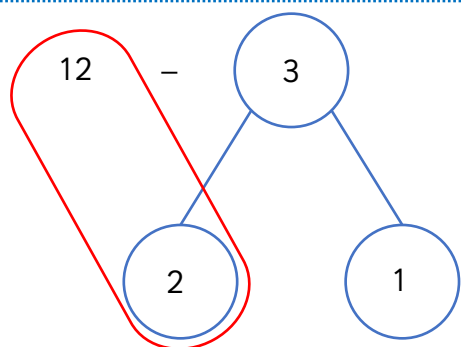
10 – 1 = __9__
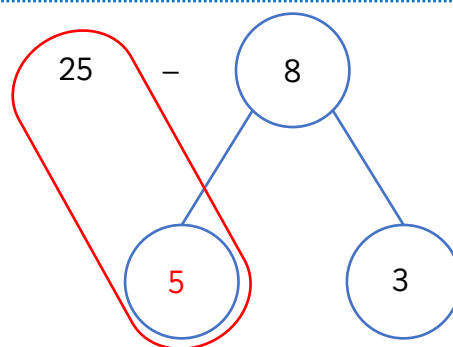
20 – 3 = __17__

Work out the subtractions.

12 – 5 = __7__   14 – 9 = __5__   25 – 6 = __19__

12 – 4 = __8__   11 – 3 = __8__   31 – 7 = __24__

What is the difference between the numbers?

__25__ – __8__ = __17__
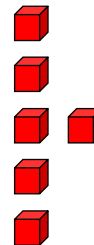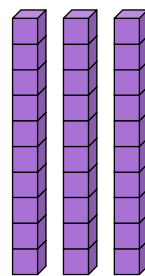
__32__ – __6__ = __26__

Work out the subtractions.

27 – 9 = __18__   37 – 8 = __29__   44 – 6 = __38__

33 – 7 = __26__   13 – 5 = __8__   13 – 7 = __6__

Use the number line to help you work out the subtractions.

36	37	38	39	40	41	42	43	44	45

$45 - 1 =$ _____ $45 - 3 =$ _____ $45 - 5 =$ _____

$45 - 2 =$ _____ $45 - 4 =$ _____ $45 - 6 =$ _____

Use number bonds to work out the subtractions.

15 – 9

4

_____ – _____ = _____

33 – 7

4

_____ – _____ = _____
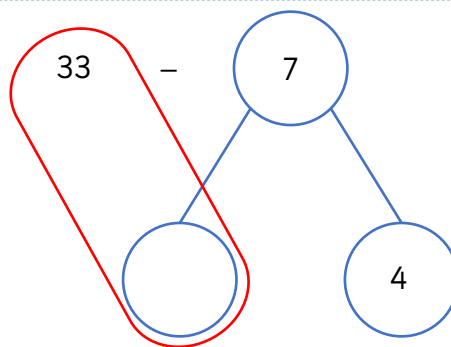
Work out the subtractions.

$72 - 5 =$ _____ $26 - 8 =$ _____ $17 - 8 =$ _____

$44 - 7 =$ _____ $82 - 6 =$ _____ $65 - 7 =$ _____

What is the difference between the numbers?

_____ – _____ = _____

_____ – _____ = _____

Work out the subtractions.

$55 - 6 =$ ___ $44 - 9 =$ ___ $13 - 9 =$ ___

$28 - 9 =$ ___ $93 - 5 =$ ___ $61 - 6 =$ ___

Use the number line to help you work out the subtractions.

$$45 - 1 = \underline{44} \qquad 45 - 3 = \underline{42} \qquad 45 - 5 = \underline{40}$$

$$45 - 2 = \underline{43} \qquad 45 - 4 = \underline{41} \qquad 45 - 6 = \underline{39}$$

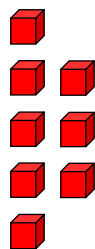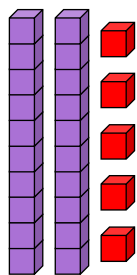## Use number bonds to work out the subtractions.

$$\underline{10} - \underline{4} = \underline{6}$$

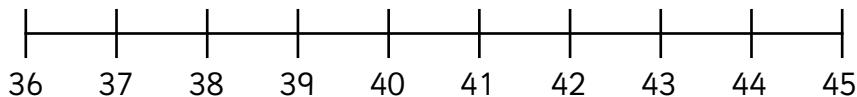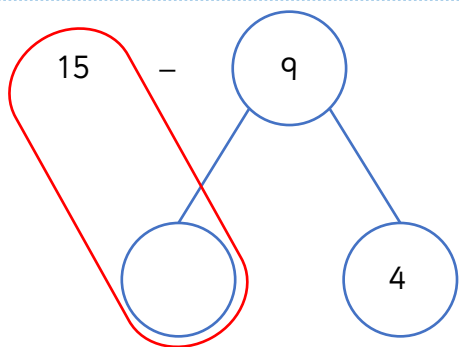$$\underline{30} - \underline{4} = \underline{26}$$

Work out the subtractions.

$$72 - 5 = \underline{67} \qquad 26 - 8 = \underline{18} \qquad 17 - 8 = \underline{9}$$

$$44 - 7 = \underline{37} \qquad 82 - 6 = \underline{76} \qquad 65 - 7 = \underline{58}$$

What is the difference between the numbers?

$$\underline{43} - \underline{9} = \underline{34}$$

$$\underline{21} - \underline{7} = \underline{14}$$

Work out the subtractions.

$$55 - 6 = \underline{49} \qquad 44 - 9 = \underline{35} \qquad 13 - 9 = \underline{4}$$

$$28 - 9 = \underline{19} \qquad 93 - 5 = \underline{88} \qquad 61 - 6 = \underline{55}$$

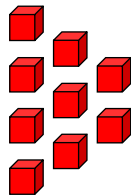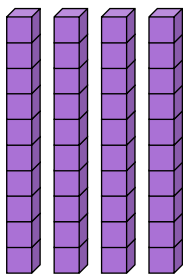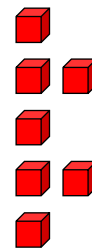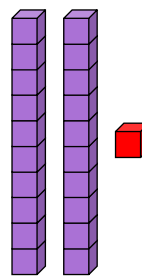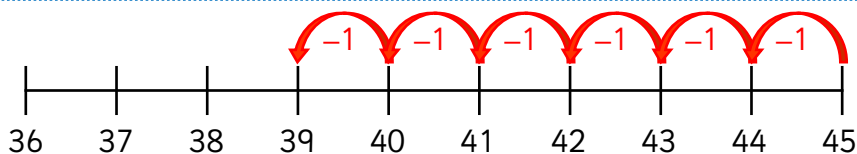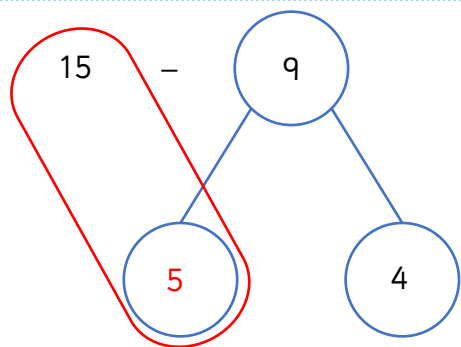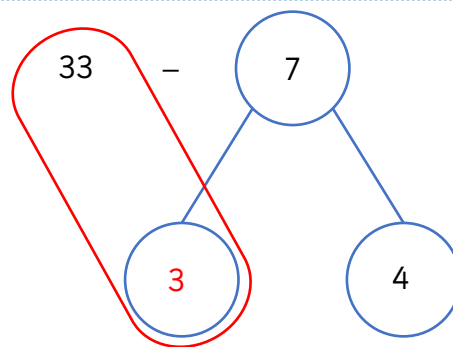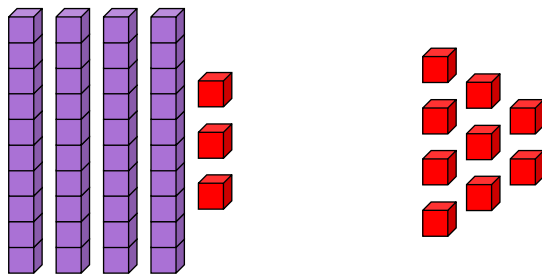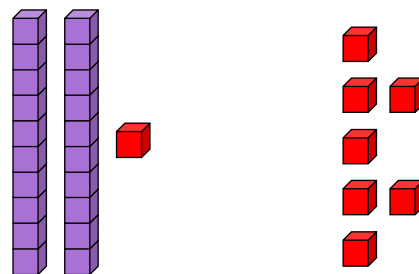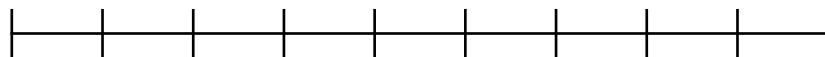Use the number line to help you work out the subtractions.

57 – 1 = _____   57 – 3 = _____   57 – 5 = _____   57 – 7 = _____

57 – 2 = _____   57 – 4 = _____   57 – 6 = _____   57 – 8 = _____

Use number bonds to work out the subtractions.

33   –   8

_____ – _____ = _____
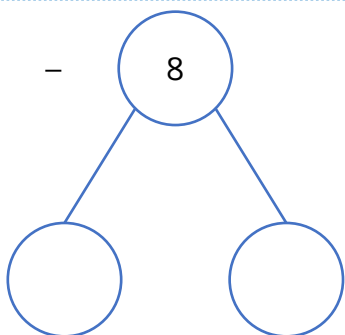
14   –   7

_____ – _____ = _____
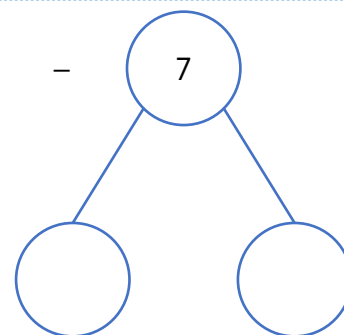
What is the difference between the numbers?
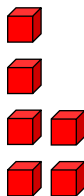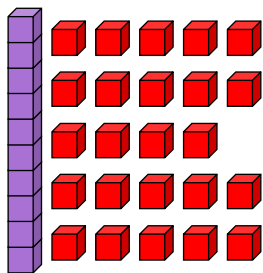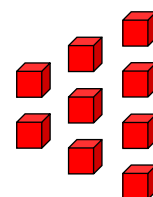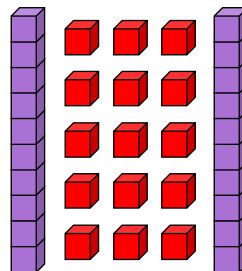
_____ – _____ = _____

_____ – _____ = _____

Use the three digit cards to write a subtraction.

Here are three digit cards.

2   4   6

How many different answers can you find?

What is the greatest difference?

What is the smallest difference?

Here are three digit cards.

9   7   1

How many different answers can you find?

What is the greatest difference?

What is the smallest difference?

Use the number line to help you work out the subtractions.

−1 −1 −1 −1 −1 −1 −1 −1

48 49 50 51 52 53 54 55 56 57

57 − 1 = __56__   57 − 3 = __54__   57 − 5 = __52__   57 − 7 = __50__

57 − 2 = __55__   57 − 4 = __53__   57 − 6 = __51__   57 − 8 = __49__

Use number bonds to work out the subtractions.

33 − 8

3   5

__30__ − __5__ = __25__

14 − 7

4   3

__10__ − __3__ = __7__

What is the difference between the numbers?

__34__ − __6__ = __28__

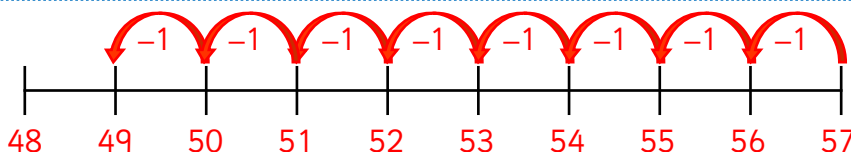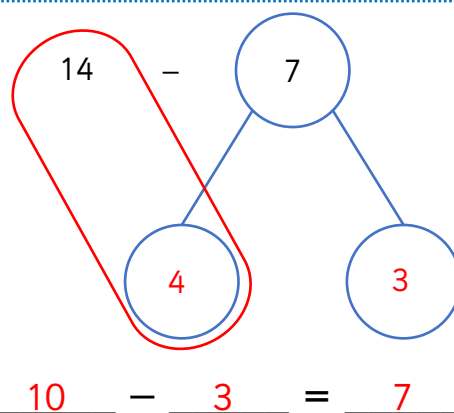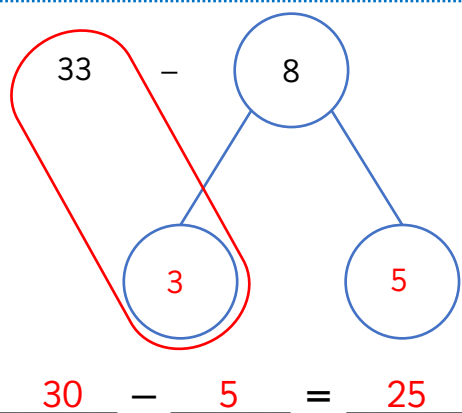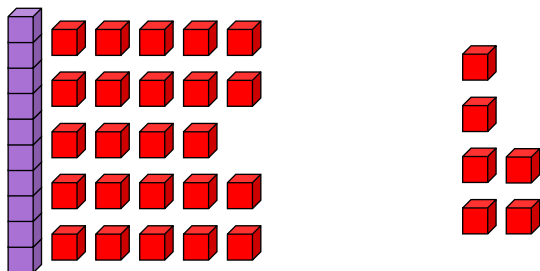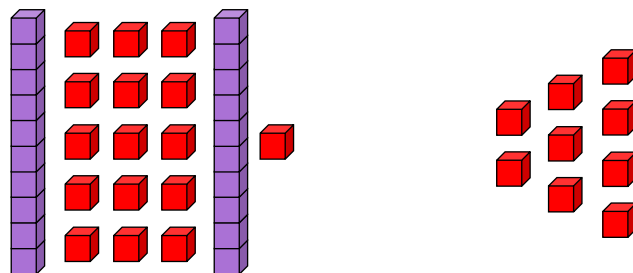__36__ − __9__ = __27__

Use the three digit cards to write a subtraction.

Here are three digit cards.

| 2 | 4 | 6 |

24 − 6 = 18
26 − 4 = 22
42 − 6 = 36
46 − 4 = 42
62 − 4 = 58
64 − 2 = 62

How many different answers can you find?
What is the greatest difference?
62 is the greatest difference.

What is the smallest difference?
18 is the smallest difference.

Here are three digit cards.

| 9 | 7 | 1 |

97 − 1 = 96
91 − 7 = 84
79 − 1 = 78
71 − 9 = 62
17 − 9 = 8
19 − 7 = 12

How many different answers can you find?
What is the greatest difference?
96 is the greatest difference.

What is the smallest difference?
8 is the smallest difference.

Esin is solving the subtraction 11 – 6.

Here is her method:

Esin

I put 6 in my head
and counted on to 11.

Is Esin's method efficient?
Can you explain why?
Can you think of another method to solve
the subtraction.

Malachi is counting back to solve 33 – 7.

He counts:

33, 32, 31, 30, 29, 28, 27

Is Malachi correct?

Explain your answer.

Esin is solving the subtraction 11 − 6.

Here is her method:

Esin

I put 6 in my head and counted on to 11.

Is Esin's method efficient?
Can you explain why?
Can you think of another method to solve the subtraction.

Esin's method of finding the difference is efficient.
She counts: 6, 7, 8, 9, 10, 11.

Malachi is counting back to solve 33 − 7.

He counts:

33, 32, 31, 30, 29, 28, 27

Is Malachi correct?

Explain your answer.

Malachi is not correct as he has included 33 when counting back.
This is a common mistake and can be modelled on a number line.

Zach is solving the subtraction 12 – 5.

Here is his method:

Zach

I put 12 in my head and counted back 5.

Is Zach's method efficient?
Can you explain why?
Can you think of another method to solve the subtraction.

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Malachi is counting back to solve 22 – 6.

He counts:

22, __, 20, __, 18, __, 16

Find the missing numbers.

Is Malachi correct?

Explain your answer.

Zach is solving the subtraction 12 – 5.

Here is his method:

Zach

I put 12 in my head and counted back 5.

Is Zach's method efficient?
Can you explain why?
Can you think of another method to solve the subtraction.

Zach's method is efficient.
He counts: 12, 11, 10, 9, 8, 7.

Malachi is counting back to solve 22 – 6.

He counts:

22, 21, 20, 19, 18, 17, 16

Find the missing numbers.

Is Malachi correct?

Explain your answer.

Malachi is correct.

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Zach and Esin are solving the subtraction 14 − 8.

Here are their methods:

Esin

I put 8 in my head and counted on to 14.

Zach

I put 14 in my head and counted back 8.

Whose method is the most efficient?
Can you explain why?
Can you think of another method to solve the subtraction.

Malachi is counting back to solve 45 − 9.

Below are some of the numbers he counts.

45, __, __, 42, __, 40, __, __, 37

Is Malachi correct?

Explain your answer.

Zach and Esin are solving the subtraction 14 – 8.

Here are their methods:

Esin

I put 8 in my head and counted on to 14.

Zach

I put 14 in my head and counted back 8.

Whose method is the most efficient?
Can you explain why?
Can you think of another method to solve the subtraction.

Zach's method is most efficient because there are less steps to take. The numbers are quite far apart so Esin's method of finding the difference takes a long time and has more room for error.

Malachi is counting back to solve 45 – 9.

Below are some of the numbers he counts.

45, <u>44</u>, <u>43</u>, 42, <u>41</u>, 40, <u>39</u>, <u>38</u>, 37

Is Malachi correct?

Explain your answer.

Malachi is not correct as he has included 45 when counting back. This is a common mistake and can be modelled on a number line.