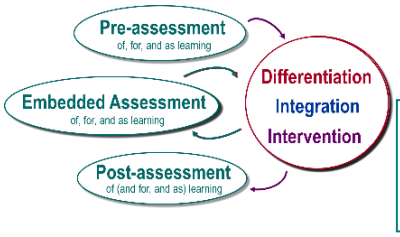


ASSESSMENT

Missing and Equivalent Number Sentences Using Order of Operations and Grouping Symbols

Addition and Subtraction 33 Patterns and Algebra 32, Multiplication and Division 29

This concept integrates Addition and Subtraction and Patterns and Algebra and is taught and investigated separately to the Addition and Subtraction Levels listed below.
The concept is then applied to Addition and Subtraction through these differentiated Levels.

AS 12 PA 7 Equivalent Number Sentences - Equals Sign as Equality

$3 + 3 = 6$

$3 = 6 - 3$

$1 + 3 = 2 + 2$

$2 + 5 = 10 - 3$

AS 22 PA 20 Missing and Equivalent Addition and Subtraction Number Sentences

$\_\_ + \_\_ = \_\_ - \_\_$

$24 + 17 = 45 - ?$

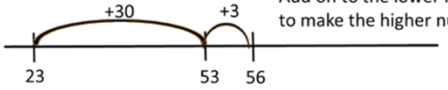
$\_\_ + \_\_ = \_\_ - \_\_$

$24 + ? = 45 - 1$

AS 19 PA 14 Missing Number Sentences - Seeing Difference in 3 Ways

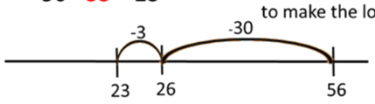
23 56

$23 + 33 = 56$



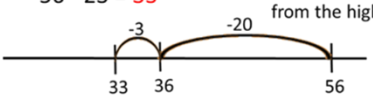
Add on to the lower number to make the higher number.

$56 - 33 = 23$



Subtract from the higher number to make the lower number.

$56 - 23 = 33$



Subtract the lower number from the higher number.

AS 27 PA 25 Equivalent Number Sentences to Find Unknown Quantities

$\_\_\_\_\_ + 136 = 267 - 84$

When a number is added to 136, the answer is the same as 267 minus 84.

When a number is subtracted from 87, the answer is the same as 34 plus 19.

$87 - \_\_\_\_\_ = 34 + 19$

AS 33 PA 32 MD 29 Order of Operations, Grouping Symbols

$8 + 5 \times 2 = 18$ $\quad$ $(8 + 5) \times 2 = 26$

PRE - ASSESSMENT

1. Select cards to make a number sentence with a missing part.
2. Record the number sentence.
3. Work out the missing part.
4. Explain that each side of the equals sign is equivalent to the other side of the equals sign.
5. Record a sentence to describe the equivalent number sentence.

Addition

$3 + 3 = 6$

Subtraction

$3 = 6 - 3$

Addition and Addition

$1 + 3 = 2 + 2$

Addition and Subtraction

$2 + 5 = 10 - 3$

Missing and Equivalent

$\_\_ + \_\_ = \_\_ - \_\_$

$24 + 17 = 45 - ?$

$\_\_ + \_\_ = \_\_ - \_\_$

$24 + ? = 45 - 1$

Record a sentence to describe the equivalent number sentence

$\_\_\_\_\_ + 136 = 267 - 84$

When a number is added to 136, the answer is the same as 267 minus 84.

When a number is subtracted from 87, the answer is the same as 34 plus 19.

$87 - \_\_\_\_\_ = 34 + 19$

POST - ASSESSMENT

1. Select cards to make a number sentence with a missing part.
2. Record the number sentence.
3. Work out the missing part.
4. Explain that each side of the equals sign is equivalent to the other side of the equals sign.
5. Record a sentence to describe the equivalent number sentence.
6. Use grouping symbols to change the order of operations.

Addition

$3 + 3 = 6$

Subtraction

$3 = 6 - 3$

Addition and Addition

$1 + 3 = 2 + 2$

Addition and Subtraction

$2 + 5 = 10 - 3$

Missing and Equivalent

$\_\_ + \_\_ = \_\_ - \_\_$

$24 + 17 = 45 - ?$

$\_\_ + \_\_ = \_\_ - \_\_$

$24 + ? = 45 - 1$

Record a sentence to describe the equivalent number sentence

$\_\_\_\_\_ + 136 = 267 - 84$

When a number is added to 136, the answer is the same as 267 minus 84.

When a number is subtracted from 87, the answer is the same as 34 plus 19.

$87 - \_\_\_\_\_ = 34 + 19$

Record a number sentence, then use grouping symbols to change the order of operations

$8 + 5 \times 2 = 18$ $\qquad$ $(8 + 5) \times 2 = 26$