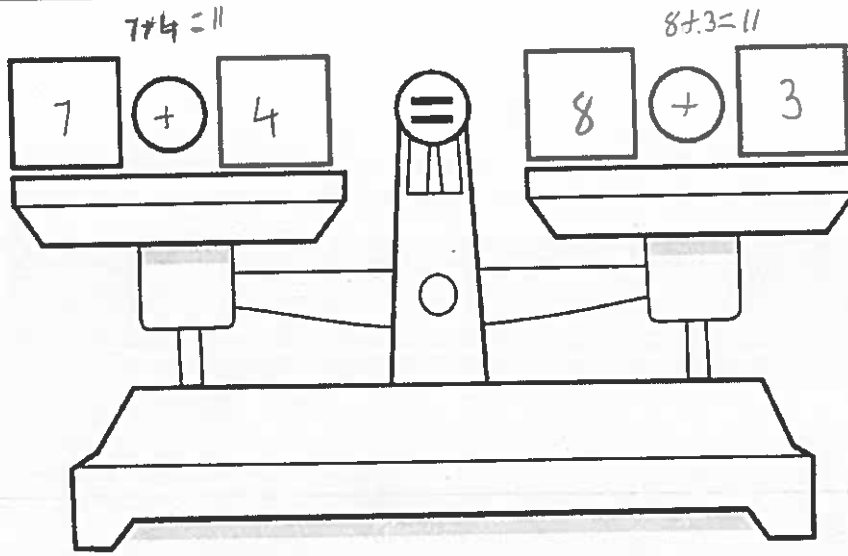


Equality Possibilities

Different ways

- $6+5=11$
- $9+2=11$
- $11 \times 1 = 11$
- $19-8=11$
- $10+1=11$
- $0+11=11$
- $20-9=11$
- $31-20=11$
- $21-10=11$
- $41-30=11$
- $18-7=11$
- $17-6=11$
- $16-5=11$

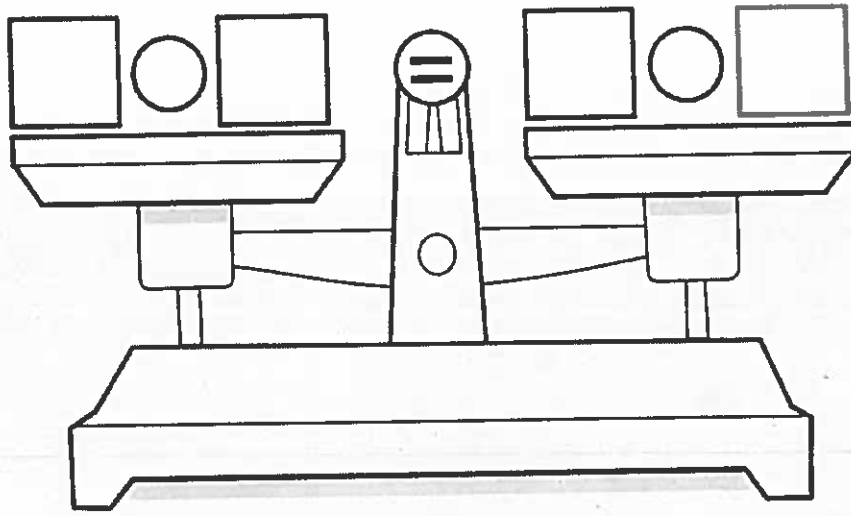


- What numbers and operations would make this equation true?
- How many possibilities can you come up with? Show more than one way.
- Show your thinking using pictures, words, and symbols.

I know this is true because I counted seven plus four equal 11 and eight plus three is 11.

$$\begin{array}{r}
 7+4=8+3 \\
 \backslash \quad / \quad \backslash \quad / \\
 11 \quad \quad \quad 11
 \end{array}$$

Equality Possibilities



⊕ ⊖ ⊗ ÷

0 1 2 3 4 5 6 7 8 9

- What numbers and operations would make this equation true?
- How many possibilities can you come up with? Show more than one way.
- Show your thinking using pictures, words, and symbols.

~~You can use 9 and 4 and subtract 4 and~~
~~use 3 and that~~ ~~how~~
 $4 \times 2 = 20 \div 5 = 4 \times 2 = 8 \times 1 = 8 \times 2 = 16 \div 2 = 8$ + it

Task Supporting Documents- Equation Organizer

(page 2)

$$\boxed{2} \oplus \boxed{1} = \boxed{3} \ominus \boxed{1}$$

Justify:

$$2+1=3 \text{ and } 3-1=2$$

$$\boxed{9} \ominus \boxed{5} = \boxed{4} \oplus \boxed{5}$$

Justify:

$$9-5=4 \text{ and } 4+5=9$$

$$\boxed{3} \oplus \boxed{4} = \boxed{7} \ominus \boxed{4}$$

Justify:

$$3+4=7 \text{ and } 7-4=3$$

Task Supporting Documents- Equation Organizer

$$\boxed{2} \ominus \boxed{1} = \boxed{1} \oplus \boxed{1}$$

Justify:

I know this because its $1+2$ $2-1=1$

$$\boxed{2} \oplus \boxed{2} = \boxed{4} \ominus \boxed{2}$$

Justify:

Its $2+2=4$ and $4-2=2$

$$\boxed{4} \otimes \boxed{2} = \boxed{8} \ominus \boxed{4}$$

Justify:

$4 \times 2 = 8$ and $8 - 4 = 4$

Rich Mathematical Task – Grade 4 – Equality Possibilities

Equality Possibilities

• What numbers and operations would make this equation true?
 • How many possibilities can you come up with? Show more than one way.
 • Show your thinking using pictures, words, and symbols.

I know that $3 \times 3 = 9$ and I know
 that $1 \times 9 = 9$ so it's the same way

Equality Possibilities

I know that 10×5 equal 50 cause if you count by 10's 5 times then you will get 50.

I know that 50×1 equal 50 cause any thing times 1 is always that number.

- What numbers and operations would make this equation true?
- How many possibilities can you come up with? Show more than one way.
- Show your thinking using pictures, words, and symbols.

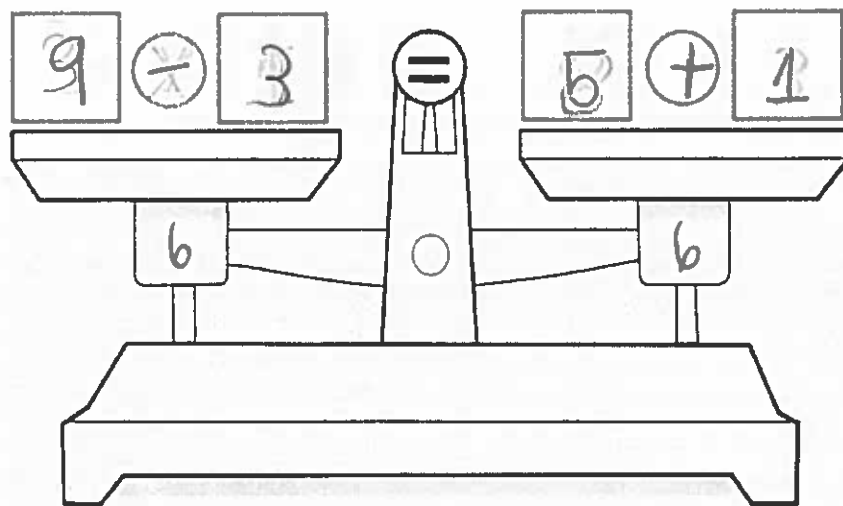
$$12 \times 12 = 144 = 1 \times 144 \quad \checkmark$$

$$12 + 12 = 24 = 20 + 4 = 24 \quad \checkmark$$

$$5 - 1 = 4 = 6 - 2 = 4 \quad \checkmark$$

$$5 \div 5 = 1 = 3 - 2 = 1 \quad \checkmark$$

Equality Possibilities



+
-
×
÷

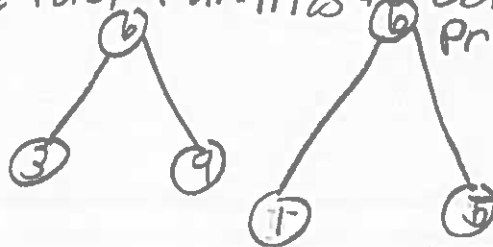
0
1
2
3
4
5
6
7
8
9

- What numbers and operations would make this equation true?
- How many possibilities can you come up with? Show more than one way.
- Show your thinking using pictures, words, and symbols.

This is true because $9 - 3 = 6$
 $5 + 1 = 6$. I used fact families to solve the problems.

|||||XXXX

|||||+ = 6

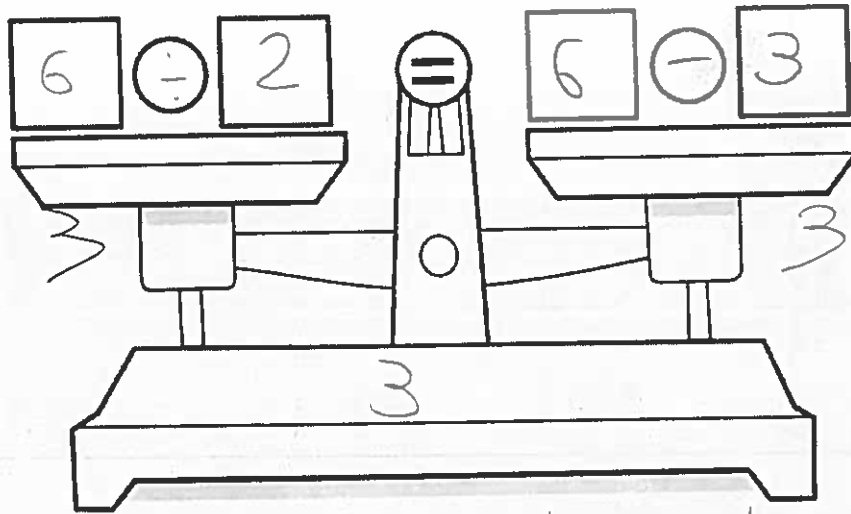


000000000 - 000 = 000000

00000 + 0 = 6 + = 6

+ = 6

Equality Possibilities



3

they bought eunie three

+ - x ÷

0 1 2 3 4 5 6 7 8 9

- What numbers and operations would make this equation true?
- How many possibilities can you come up with? Show more than one way.
- Show your thinking using pictures, words, and symbols.

more on back

$8 \div 2 = 8 - 4$

$10 \div 2 = 10 - 5$

$10 - 5 = 20 \div 5$

$64 - 63 = 2 - 1$

$60 - 6 = 20 - 10$

$20 \times 2 = 40 \div 1$

$40 + 2 = 50 - 8$

$100 - 50 = 110 - 60$

$2000 - 6000 = 4000 + 1000$

$500 - 20 = 600 - 20$

This is true because they bought eunie three

$$5,000 \div 1 \quad 6,000 - 1,000$$

$$5,000$$

$$500 - 200 \quad 600 \div 2$$

$$300$$

$$500 - 100 \quad 600 - 200$$

$$400$$

$$500 \quad 1,000 - 500 \quad 1000 \div 2$$

$$500$$

$$2,000 \div 2 \quad 2,000 \quad 5,000 - 4,000$$

$$1,000$$

$$5,000 + 5,000 \quad 10,000 - 0$$

$$10,000$$

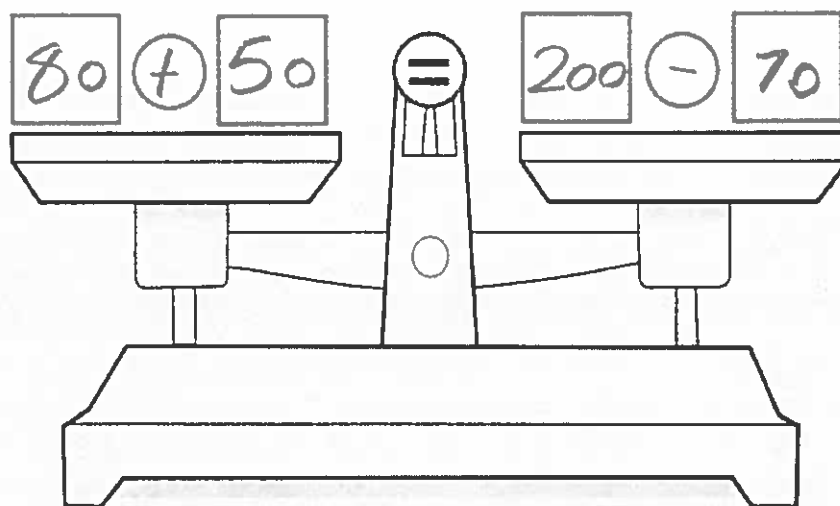
$$4,000 - 1,000 \quad 3,000 - 0$$

$$3,000$$

$$1,000 \div 2 \quad 2,000 - 1,500$$

$$500$$

Equality Possibilities



⊕ ⊖ ⊗ ÷

0 1 2 3 4 5 6 7 8 9

- What numbers and operations would make this equation true?
- How many possibilities can you come up with? Show more than one way.
- Show your thinking using pictures, words, and symbols.

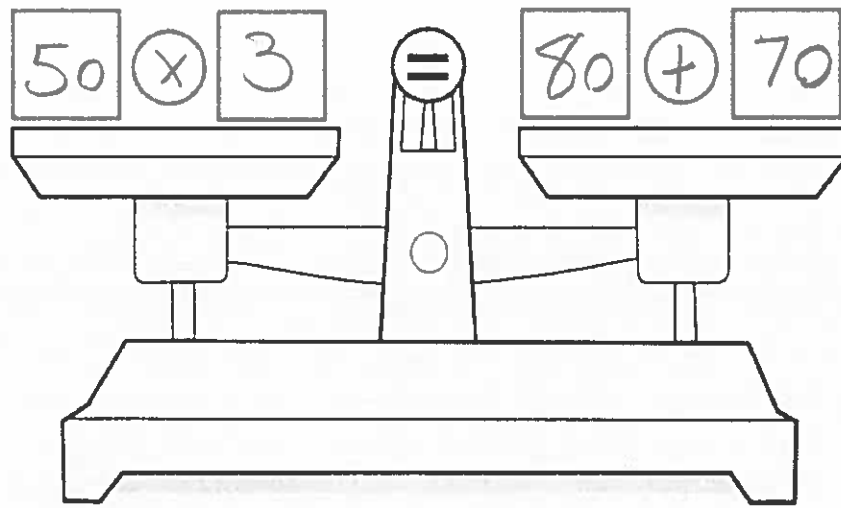
I know this
is equal cause 5 plus 8 equals

⑬. $\begin{array}{r} 130 \\ - 70 \\ \hline 60 \end{array}$ plus $\begin{array}{r} 50 \\ + 80 \\ \hline 130 \end{array}$

would be $\begin{array}{r} 130 \\ - 70 \\ \hline 60 \end{array}$ | $\begin{array}{r} 130 \\ - 70 \\ \hline 60 \end{array}$ | $\begin{array}{r} 130 \\ + 50 \\ \hline 180 \end{array}$

⑬. $130 = 130$

Equality Possibilities



+
-
×
÷

0
1
2
3
4
5
6
7
8
9

- What numbers and operations would make this equation true?
- How many possibilities can you come up with? Show more than one way.
- Show your thinking using pictures, words, and symbols.

$$\begin{array}{r} 50 \\ \times 3 \\ \hline 150 \end{array}$$

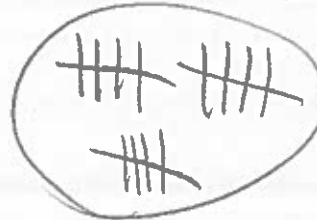
50 100 150

$$\begin{array}{r} 150 \\ \cancel{80} \\ + 70 \\ \hline 150 \end{array}$$

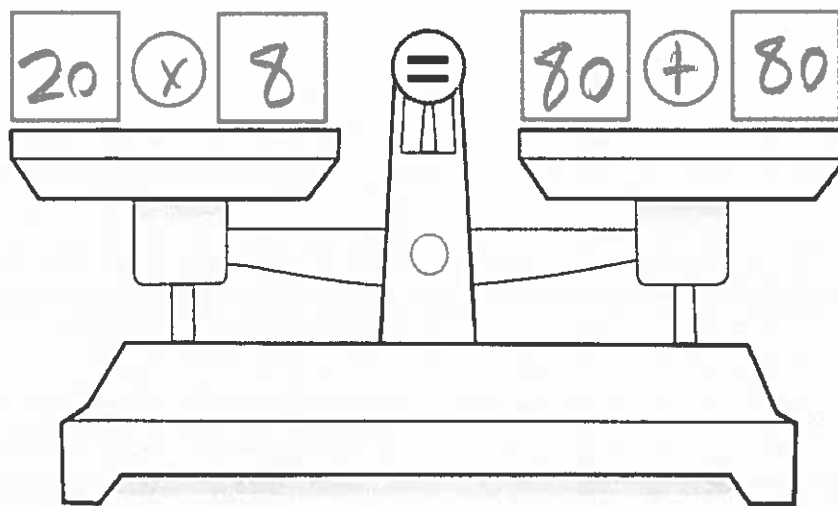
8+7=

$$\frac{80+70}{150}$$

8+7=15



Equality Possibilities



⊕ ⊖ ⊗ ÷

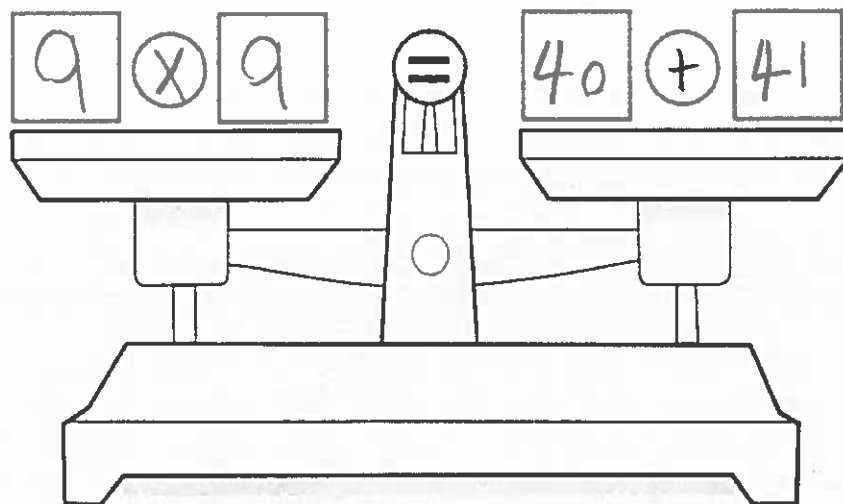
0 1 2 3 4 5 6 7 8 9

- What numbers and operations would make this equation true?
- How many possibilities can you come up with? Show more than one way.
- Show your thinking using pictures, words, and symbols.

Handwritten student work showing various mathematical expressions and calculations:

- A multiplication problem:
$$\begin{array}{r} 20 \\ \times 8 \\ \hline 160 \end{array}$$
 with '160' circled.
- A list of numbers: 20, 40, 60, 80, 100, with superscripts 1, 2, 3, 4, 5 above them.
- A calculation:
$$\begin{array}{r} 40 \\ \times 7 \\ \hline 140 \end{array}$$
- A circled number: 160.
- An addition problem:
$$\begin{array}{r} 80 \\ + 80 \\ \hline 160 \end{array}$$
 with '160' circled.
- A simple addition: $8 + 8 = 16$ with '16' circled.
- Another addition problem:
$$\begin{array}{r} 160 \\ + 80 \\ \hline 160 \end{array}$$
 with '160' circled.

Equality Possibilities



⊕ ⊖ ⊗ ÷

0 1 2 3 4 5 6 7 8 9

- What numbers and operations would make this equation true?
- How many possibilities can you come up with? Show more than one way.
- Show your thinking using pictures, words, and symbols.

$$\begin{array}{r} 81 \\ \cancel{40} \\ + 41 \\ \hline 81 \end{array}$$

$$\begin{array}{r} 9 \\ \times 9 \\ \hline 81 \end{array}$$

$$\begin{array}{r} 1 \\ 9 \\ \times 9 \\ \hline 81 \end{array}$$

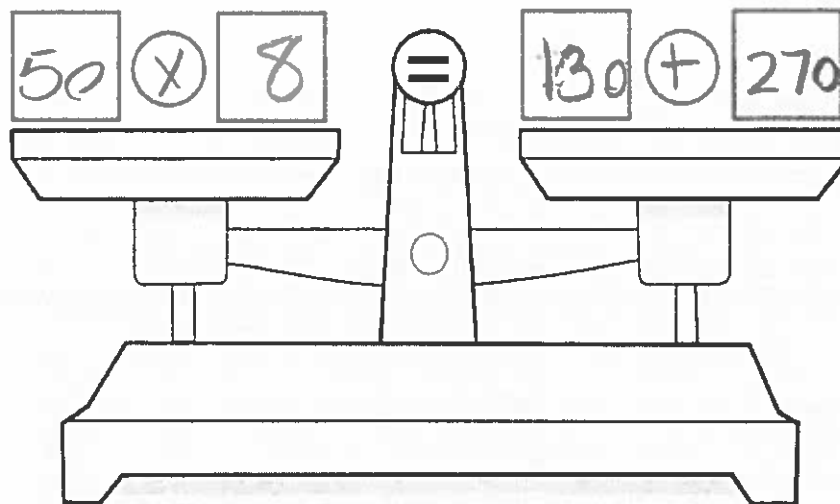
$$\begin{array}{r} 2 \\ 27 \\ \times 3 \\ \hline 81 \end{array}$$

$$\begin{array}{r} 3 \\ 36 \\ \times 9 \\ \hline 81 \end{array}$$

$$\begin{array}{r} 4 \\ 45 \\ \times 9 \\ \hline 81 \end{array}$$

$$\begin{array}{r} 5 \\ 54 \\ \times 9 \\ \hline 81 \end{array}$$

Equality Possibilities



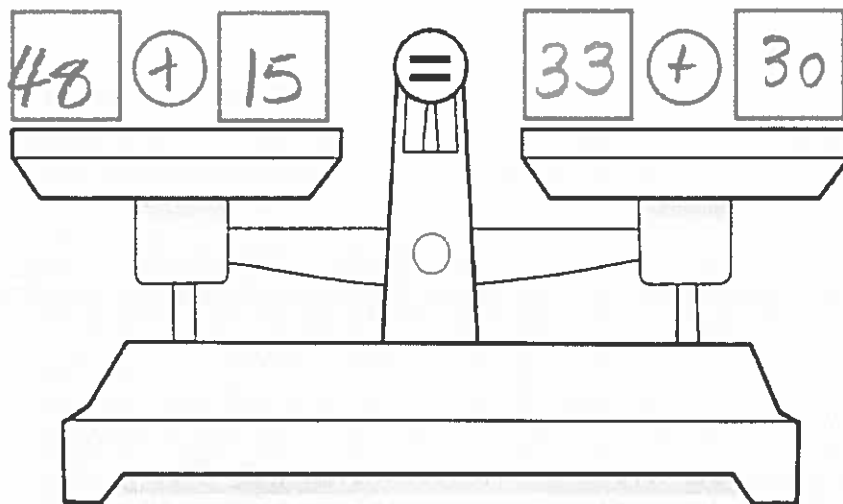
+ - x ÷

0 1 2 3 4 5 6 7 8 9

- What numbers and operations would make this equation true?
- How many possibilities can you come up with? Show more than one way.
- Show your thinking using pictures, words, and symbols.

	50 ¹	100 ²	150 ³	200 ⁴
50	250 ⁵	300 ⁶	350 ⁷	400 ⁸
x 8				
<hr/>				
400				
	130			
	+270			
	<hr/>			
	400			

Equality Possibilities



- What numbers and operations would make this equation true?
- How many possibilities can you come up with? Show more than one way.
- Show your thinking using pictures, words, and symbols.

$$\begin{array}{r} 48 \\ + 15 \\ \hline 63 \end{array}$$

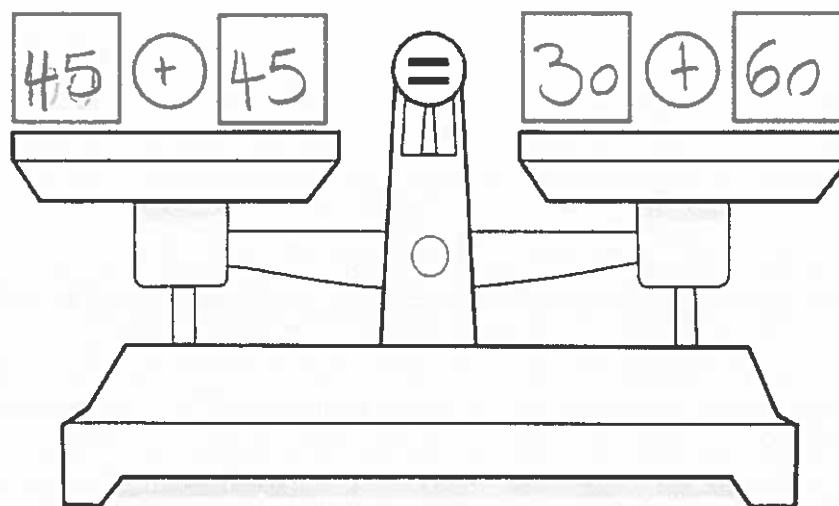
$$\begin{array}{l} 40 + 10 = 50 \\ 8 + 5 = 13 \end{array}$$

48 Plus 15

$$50 + 13 = 63$$

$$\begin{array}{r} 63 \\ 33 \\ + 30 \\ \hline 63 \end{array}$$

Equality Possibilities



⊕ ⊖ ⊗ ÷

0 1 2 3 4 5 6 7 8 9

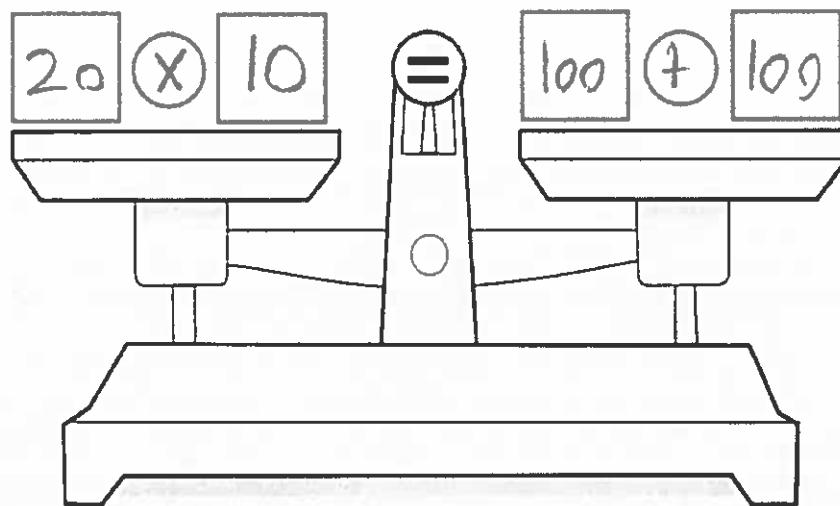
- What numbers and operations would make this equation true?
- How many possibilities can you come up with? Show more than one way.
- Show your thinking using pictures, words, and symbols.

$$\begin{array}{r} \cancel{80} \\ \cancel{45} \\ + 45 \\ \hline 90 \end{array}$$

$$80 + 10 = 90$$

$$\begin{array}{r} 90 \\ 30 \\ + 60 \\ \hline 90 \end{array}$$

Equality Possibilities



+ - x ÷

0 1 2 3 4 5 6 7 8 9

- What numbers and operations would make this equation true?
- How many possibilities can you come up with? Show more than one way.
- Show your thinking using pictures, words, and symbols.

20 40 60 80 100

120 140 160 180 200

200
~~x 10~~
 + 100

 200

200
~~20~~
 x 10
