

WA6MNAUE1

Understanding equalities and inequalities

Core + Challenge

Number Sentences with Brackets

I can complete, check and write true number sentences using $=$, $\neq$, $<$, $>$ and brackets.

Name: _____ Date: _____ Score: _____ / 56

Key idea

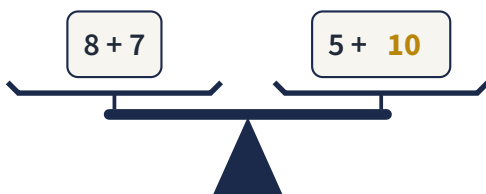
The **equals sign** $=$ means both sides have the **same value**, like a balanced scale. $\neq$ means **not equal**.

$<$ means “is less than” and $>$ means “is greater than”. The open end faces the bigger side.

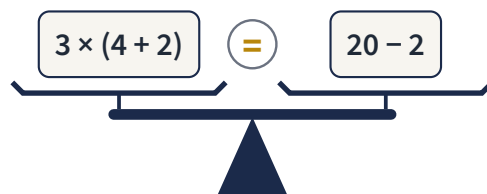
Work out **brackets first**, then $\times$ and $\div$, then $+$ and $-$ (each from left to right).

Example: $8 + 7 = 5 + 10$, because both sides are 15. And $3 \times (4 + 2) = 3 \times 6 = 18$.

Both sides are worth 15



Brackets first: $3 \times 6 = 18 = 20 - 2$



A Warm up *complete and compare*

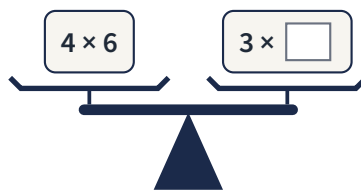
/ 16 marks

Write the missing number so the scale balances. 1 mark each.

1



2



3



4



5



6



Write $<$, $>$ or $=$ in the box to make each statement true. 1 mark each.

7 6×7 $40 + 3$

8 $72 \div 8$ 3×3

9 $15 + 27$ $50 - 9$

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10 4×25 $125 - 25$

11 $3 + 4 \times 5$ $(3 + 4) \times 5$

12 $48 \div 4 + 2$ $48 \div (4 + 2)$

Work out each side. Write $<$, $>$ or $=$ in the circle. Would these sides balance on a scale? 1 mark each.

13

8×5 6×7

14

$90 - 35$ 11×4

15

$64 \div 8$ 2×5

16

$100 - 28$ 9×8

B

Practise use the skill

/ 21 marks

1 Write the missing number on each scale so that it balances.

[2 marks]

a)



b)



2 Is each statement **true** or **false**? (Remember $\neq$ means **not equal**.) If it is false, change the sign or the **right side** so that it is true.

[3 marks]

Statement	True or false?	If false, make it true
$6 + 4 \times 2 \neq 20$		
$(18 - 6) \div 3 \neq 4$		
$25 - 5 \times 3 = 60$		

3 At the school fete, 4 friends each buy a sausage sizzle for \$3 and a drink for \$2. Write **one** number sentence with brackets for the total cost. Then work it out.

[2 marks]

Answer: _____

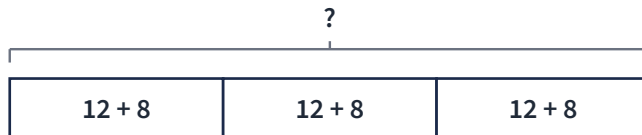
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- 4 Write a number in each box to make a true statement. In **b)**, use a **whole** number. In **c)**, give **two different** numbers that work. [3 marks]

a) $\square \times 6 = 40 - 4$ b) $7 \times 5 > \square \times 6$ c) $45 \div \square < 10$

c) Two numbers that work: _____

- 5 Write a number sentence with **brackets** for this bar model. Then find the **total**. [2 marks]



Answer: _____

- 6 Work out the value of each number sentence. Then write the letters in order from **smallest** to **largest** value. [2 marks]

	Number sentence	Value
A	$5 + 3 \times 4$	
B	$(5 + 3) \times 4$	
C	$5 \times 3 + 4$	
D	$5 \times (3 + 4)$	

Answer: _____

- 7 Draw a line to join each number sentence to its value. [2 marks]

$20 - 4 \times 3$ •

• 13

$(20 - 4) \times 3$ •

• 8

$20 - 4 + 3$ •

• 19

$20 - (4 + 3)$ •

• 48

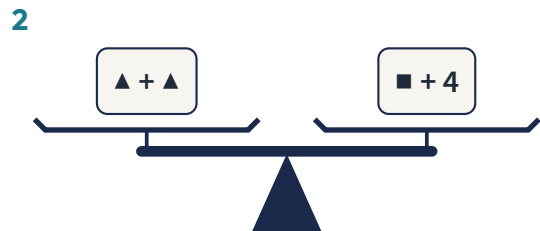
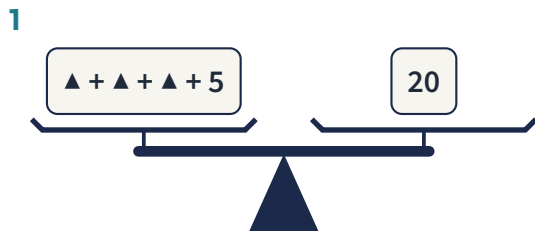
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- 8 Mr Lee buys **5** packs of **12** pencils. He gives away **18** pencils. Tick **all** the number sentences that match the story. Then find how many pencils he has left. [3 marks]

	Number sentence	Tick
A	$5 \times 12 - 18$	
B	$5 \times 18 - 12$	
C	$(5 \times 12) - 18$	
D	$(12 - 5) \times 18$	

Answer: _____

- 9 Each $\blacktriangle$ has the **same** value. Each $\blacksquare$ has the same value. Both scales balance. Find the value of $\blacktriangle$ and of $\blacksquare$. [2 marks]



Answer: _____

C Think it through *explain your thinking*

/ 10 marks

- 1 Mia says the missing number in $3 \times (12 + 8) = \square \times 4 + 20$ is **15**, “because $3 \times 20 = 60$ and $60 \div 4 = 15$ ”. Do you agree with Mia? Explain. [2 marks]

- 2 **True or false?** $36 \div (6 \div 2) = 36 \div 6 \div 2$. Prove your answer by working out both sides. [2 marks]

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- 3 **Always, sometimes or never true?** “Adding brackets to a number sentence changes its value.” Circle one. Give examples to show why. [2 marks]

☐ Always☐ Sometimes☐ Never

- 4 Which is the **odd one out**? $4 \times 6 + 6$, 5×6 , $6 \times (4 + 1)$, $4 \times (6 + 6)$ Explain your choice. [2 marks]

- 5 Sam says $99 \times 6 > 100 \times 6 - 5$. Without working out 99×6 first, explain whether Sam is right. [2 marks]

D Challenge *stretch yourself*

/ 9 marks

- 1 Use the digits **2, 3, 4** and **5** once each in the boxes. [3 marks]

$$(\square + \square) \times \square - \square$$

a) Make the **largest** possible value. **b)** Make the **smallest** possible value.

Answer: _____

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- 2 Put **one** pair of brackets into $2 \times 3 + 4 \times 5$ in different places. How many **different** values can you make? Show each one. (No brackets gives 26.)

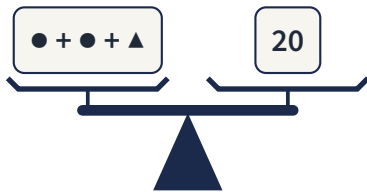
[3 marks]

Answer: _____

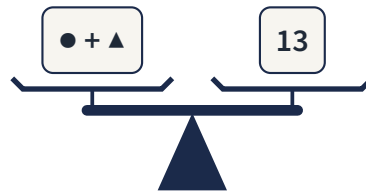
- 3 Each shape has the same value on every scale. All three scales balance. Find the value of ●, ▲ and ■.

[3 marks]

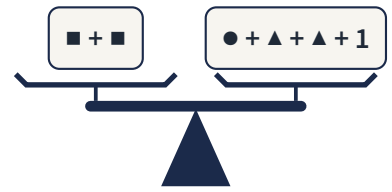
1



2



3



Answer: _____

How did I go?Warm up ___ / 16 Practise ___ / 21 Think it through ___ / 10 Challenge ___ / 9 **Total** ___ / 56Want help with Year 6 maths? Our tutors make it click. **Book a free trial class at [edulift.com.au](https://www.edulift.com.au)**