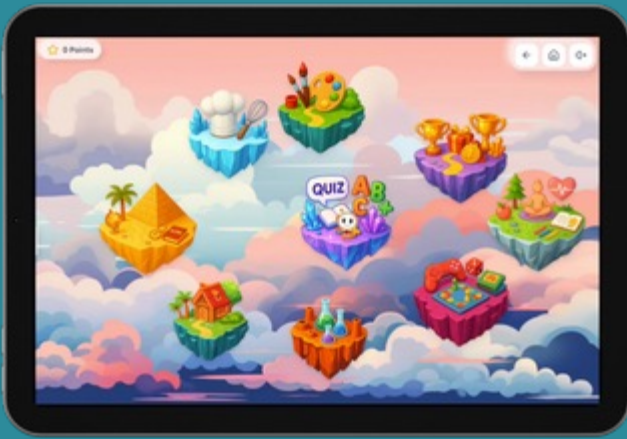


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Near Doubles - Year 2

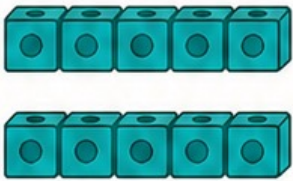
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Game 2: Near Doubles Path	
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Near Doubles Strategy

Use a double you know, then adjust by 1.

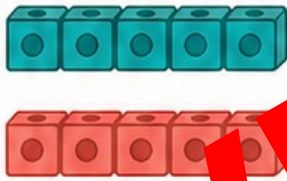
1. Find the double



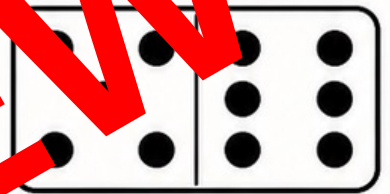
=



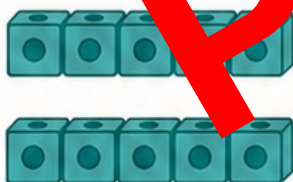
2. Adjust by 1



3. Check the total



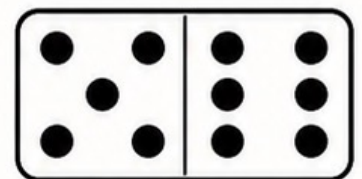
$$5 + 6 = 5 + 5 + 1 = 11$$



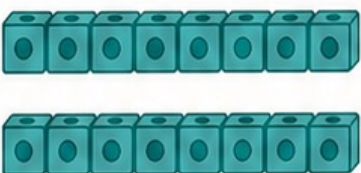
=



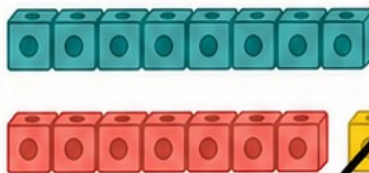
+1



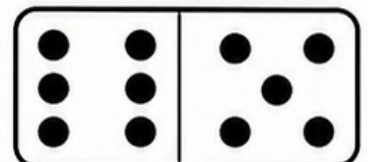
$$8 + 7 = 8 + 8 - 1 = 15$$



=



-1





Double It, Adjust It



1. Choose a pair.



2. Build the double.



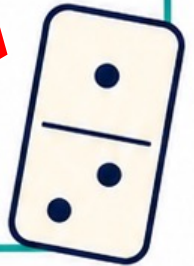
3. Add or take one.



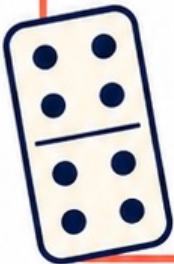
4. Say the total.



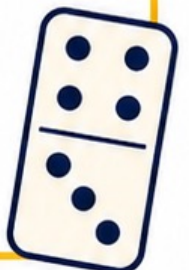
NUMBER PAIR



KNOWN DOUBLE



ADJUST BY 1



PREVIEW

Equation and Number Cards

$2 + 3$



$3 + 4$



$4 + 5$



$5 + 6$



$6 + 7$



$7 + 8$



$8 + 9$



$9 + 10$



$20 + 21$



$30 + 29$



5



7



9



11



13



15



17



19



41



59



PREVIEW

Near Doubles Path Game

START



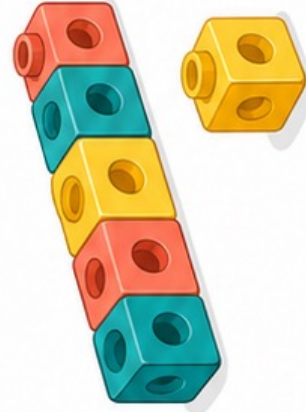
How to play



2-4 players



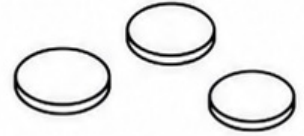
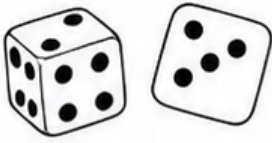
Take turns rolling one die. Move your counter, solve the space and explain your near-double strategy. First to FINISH wins.



Near Doubles Path Recording Sheet

Name: _____

Date: _____



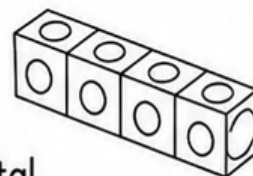
Turn	Equation	Known Double	Adjustment	Total
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

PREVIEW

Name: _____

Date: _____

Build the Double



Draw the same number of dots in both boxes. Write each total.

1. $1 + 1 =$

--	--

= _____

2. $2 + 2 =$

--	--

= _____

3. $3 + 3 =$

--	--

= _____

4. $4 + 4 =$

--	--

= _____

5. $5 + 5 =$

--	--

= _____

6. $6 + 6 =$

--	--

= _____

7. $7 + 7 =$

--	--

= _____

8. $8 + 8 =$

--	--

= _____

9. $9 + 9 =$

--	--

= _____

10. $10 + 10 =$

--	--

11. $11 + 11 =$

--	--

12. $12 + 12 =$

--	--

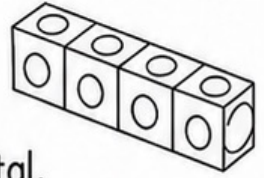
PREVIEW

Name: _____

ANSWERS

Date: _____

Build the Double



Draw the same number of dots in both boxes. Write each total.

1. $1 + 1 =$

1	1
---	---

$= 2$

2. $2 + 2 =$

2	2
---	---

$= 4$

3. $3 + 3 =$

3	3
---	---

$= 6$

4. $4 + 4 =$

4	4
---	---

$= 8$

5. $5 + 5 =$

5	5
---	---

$= 10$

6. $6 + 6 =$

6	6
---	---

$= 12$

7. $7 + 7 =$

7	7
---	---

$= 14$

8. $8 + 8 =$

8	8
---	---

$= 16$

9. $9 + 9 =$

9	9
---	---

$= 18$

10. $10 + 10 =$

10	10
----	----

$= 20$

11. $11 + 11 =$

11	11
----	----

$= 22$

12. $12 + 12 =$

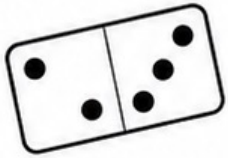
12	12
----	----

$= 24$

PREVIEW

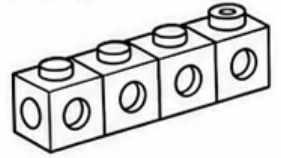
Name: _____

Date: _____



Add One or Take One

Use a known double. Then add or take one.

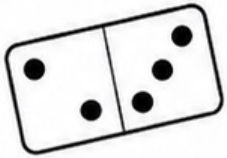


Problem	Known Double	Adjust +1 or -1	Total
1. $2 + 3$			
2. $4 + 5$			
3. $5 + 6$			
4. $7 + 8$			
5. $9 + 8$			
6. $10 + 11$			
7. $12 + 1$			
8. $14 + 15$			
9. $16 + 15$			
10. $18 + 19$			
11. $20 + 21$			
12. $30 + 29$			

PREVIEW

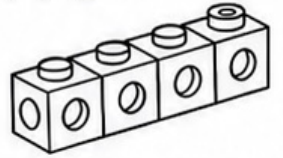
Name: **ANSWERS**

Date: _____



Add One or Take One

Use a known double. Then add or take one.



Problem	Known Double	Adjust +1 or -1	Total
1. $2 + 3$	$2 + 2 = 4$	+1	5
2. $4 + 5$	$4 + 4 = 8$	+1	9
3. $5 + 6$	$5 + 5 = 10$	+1	11
4. $7 + 8$	$7 + 7 = 14$	+1	15
5. $9 + 8$	$8 + 8 = 16$	+1	17
6. $10 + 11$	$10 + 10 = 20$	+1	21
7. $12 + 11$	$11 + 11 = 22$	+1	23
8. $14 + 15$	$14 + 14 = 28$	+1	29
9. $16 + 15$	$15 + 15 = 30$	+1	31
10. $18 + 19$	$18 + 18 = 36$	+1	37
11. $20 + 21$	$20 + 20 = 40$	+1	41
12. $30 + 29$	$29 + 29 = 58$	+1	59

Name: _____

Date: _____

Picture the Near Double

Find the equal parts. Then add the extra 1.

1. $2 + 3$

2

2	+1
---	----

Total: _____

2. $3 + 4$

3

3	+1
---	----

Total: _____

3. $4 + 5$

4

4	+1
---	----

Total: _____

4. $5 + 6$

5

5	+1
---	----

Total: _____

5. $6 + 7$

6

6	+1
---	----

Total: _____

6. $7 + 8$

7

7	+1
---	----

Total: _____

7. $8 + 9$

8

8	+1
---	----

Total: _____

8. $9 + 10$

9

9	+1
---	----

Total: _____

PREVIEW

Name: _____

ANSWERS

Date: _____

Picture the Near Double

Find the equal parts. Then add the extra 1.

1. $2 + 3$

2

2	+1
---	----

Total: 5

2. $3 + 4$

3

3	+1
---	----

Total: 7

3. $4 + 5$

4

4	+1
---	----

Total: 9

4. $5 + 6$

5

5	+1
---	----

Total: 11

5. $6 + 7$

6

6	+1
---	----

Total: 13

6. $7 + 8$

7

7	+1
---	----

Total: 15

7. $8 + 9$

8

8	+1
---	----

Total: 17

8. $9 + 10$

9

9	+1
---	----

Total: 19

Name: _____

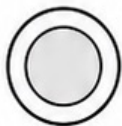
Date: _____

Near Doubles Word Problems

Use a known double. Show your equation and total.

1.

Mia has 5 red counters and 6 blue counters. How many counters does she have altogether?



Equation: _____

Known double: _____

Total: _____

2.

There are 7 birds on a fence and 8 birds in a tree. How many birds are there?



Equation: _____

Known double: _____

Total: _____

3.

A class has 9 picture books and 10 information books. How many books are there?



Equation: _____

Known double: _____

Total: _____

Noah finds 11 white shells and 12 brown shells. How many shells does he find?



Equation: _____

Known double: _____

Total: _____

5.

A sheet has 14 star stickers and 15 circle stickers. How many stickers are there?



Equation: _____

Known double: _____

Total: _____

6.

A fruit stall has 19 apples and 20 pears. How many pieces of fruit are there?



Equation: _____

Known double: _____

Total: _____

Name: _____

ANSWERS

Date: _____

Near Doubles Word Problems

Use a known double. Show your equation and total.

1.

Mia has 5 red counters and 6 blue counters. How many counters does she have altogether?

Equation: $5 + 6 = 11$ Known double: $5 + 5 = 10$ Total: 11

2.

There are 7 birds on a fence and 8 birds in a tree. How many birds are there?

Equation: $7 + 8 = 15$ Known double: $7 + 7 = 14$ Total: 15

3.

A class has 9 picture books and 10 information books. How many books are there?

Equation: $9 + 10 = 19$ Known double: $9 + 9 = 18$ Total: 19

Noah finds 11 white shells and 12 brown shells. How many shells does he find?

Equation: $11 + 12 = 23$ Known double: $11 + 11 = 22$ Total: 23

5.

A sheet has 14 star stickers and 15 circle stickers. How many stickers are there?

Equation: $14 + 15 = 29$ Known double: $14 + 14 = 28$ Total: 29

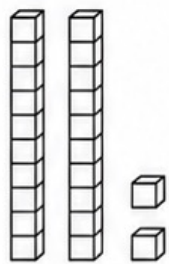
6.

A fruit stall has 19 apples and 20 pears. How many pieces of fruit are there?

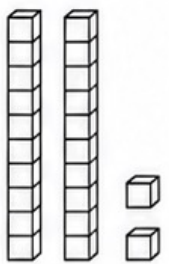
Equation: $19 + 20 = 39$ Known double: $19 + 19 = 38$ Total: 39

Name: _____

Date: _____



Extend to Tens



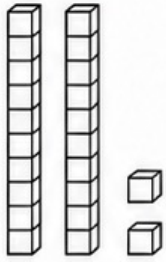
Use the nearest double to solve each problem.

Problem	Known Double	Total
1. 20 + 21		
2. 30 + 29		
3. 40 + 41		
4. 50 + 49		
5. 60 + 61		
6. 70 + 69		
7. 80 + 81		
8. 90 + 89		
9. 25 + 26		
10. 35 + 34		
11. 45 + 46		
12. 55 + 54		

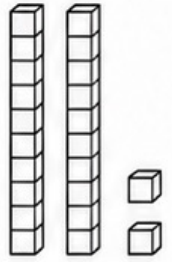
PREVIEW

Name: **ANSWERS**

Date: _____



Extend to Tens



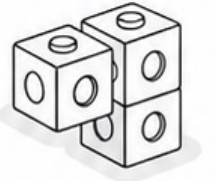
Use the nearest double to solve each problem.

Problem	Known Double	Total
1. $20 + 21$	$20 + 20 = 40$	41
2. $30 + 29$	$30 + 30 = 60$	59
3. $40 + 41$	$40 + 40 = 80$	81
4. $50 + 49$	$50 + 50 = 100$	99
5. $60 + 61$	$60 + 60 = 120$	121
6. $70 + 69$	$70 + 70 = 140$	139
7. $80 + 81$	$80 + 80 = 160$	161
8. $90 + 89$	$90 + 90 = 180$	179
9. $25 + 26$	$25 + 25 = 50$	51
10. $35 + 34$	$35 + 35 = 70$	69
11. $45 + 46$	$45 + 45 = 90$	91
12. $55 + 54$	$55 + 55 = 110$	109

Near Doubles Check-in

Show What You Know

Use a known double and adjust by 1.



Name: _____

Date: _____

1. Write double 4: _____

2. Write double 7: _____

3. Solve: $5 + 6 =$ _____

4. Solve: $8 + 9 =$ _____

5. Which known double helps you solve $9 + 10$ using $+1$? Circle one:

$8 + 8$

$7 + 9$

$10 + 10$

6. Complete: $6 + 7 = 6 + 6 + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

7. True or false? $12 + 13 = 25$. _____

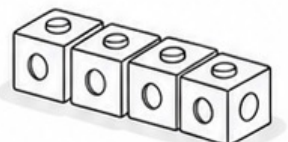
8. Circle the near double: $8 + 8$

$8 + 9$

$8 + 10$

9. Solve: $20 + 21 =$ _____

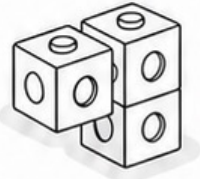
10. Complete: $15 + 14 = \underline{\hspace{1cm}} + \underline{\hspace{1cm}} + 1 = \underline{\hspace{1cm}}$



Near Doubles Check-in

Show What You Know

Use a known double and adjust by 1.



Name: _____

ANSWERS

Date: _____

1. Write double 4: 8

2. Write double 7: 14

3. Solve: $5 + 6 =$ 11

4. Solve: $8 + 9 =$ 17

5. Which known double helps you solve $9 + 10$ using $+1$? Circle one:

$8 + 8$

$9 + 9$

$10 + 10$

6. Complete: $6 + 7 = 6 + 6 +$ 1 $=$ 13

7. True or false? $12 + 13 = 25$. True

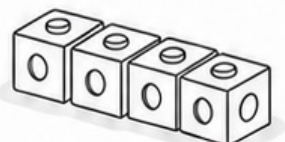
8. Circle the near double: $8 + 8$

$8 + 9$

$8 + 10$

9. Solve: $20 + 21 =$ 41

10. Complete: $15 + 14 =$ 14 $+$ 14 $+$ 1 $=$ 29



Name: _____

Date: _____

Near Doubles Check-in

Apply and Explain

Show your thinking with numbers, pictures or words.

1. Solve $14 + 15$. Known double: _____ Total: _____

Equation: _____

Known double: _____

Total: _____

Explanation:

2. Solve $20 + 19$. Known double: _____ Total: _____

Equation: _____

Known double: _____

Total: _____

Explanation:

3. A student says $8 + 8 = 16$. Is the student correct? Show the near-double strategy and explain.

Equation: _____

Known double: _____

Total: _____

Explanation:

4. There are 12 blue counters and 13 yellow counters. How many counters are there altogether? Write an equation, the known double and the total.

Equation: _____

Known double: _____

Total: _____

Explanation:



PREVIEW

Name: ANSWERS

Date: _____

Near Doubles Check-in

Apply and Explain

Show your thinking with numbers, pictures or words.

1. Solve $14 + 15$. Known double: $14 + 14 = 28$ Total: 29

Equation: $14 + 15 = 29$

Known double: $14 + 14 = 28$

Total: 29

Explanation:

Double 14 is 28, then add 1.

2. Solve $20 + 19$. Known double: $20 + 20 = 40$ Total: 39

Equation: $20 + 19 = 39$

Known double: $20 + 20 = 40$

Total: _____

Explanation:

Double 20 is 40, then take 1.

3. A student says $8 + 9 = 16$. Is the student correct? Show the near-double strategy and explain.

Equation: $8 + 9 = 17$

Known double: $8 + 8 = 16$

Total: 17

Explanation:

No. Double 8 is 16, then add 1.

4. There are 12 blue counters and 13 yellow counters. How many counters are there altogether? Write an equation, the known double and the total.

Equation: $12 + 13 = 25$

Known double: $12 + 12 = 24$

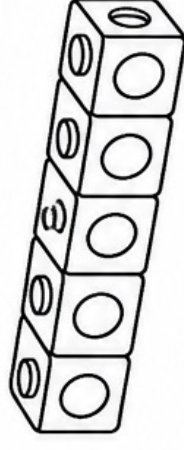
Total: 25

Explanation:

Double 12 is 24, then add 1.



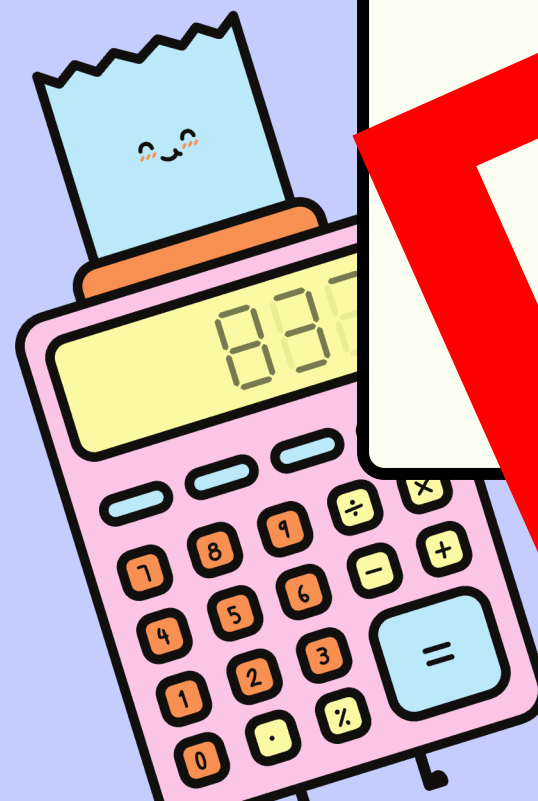
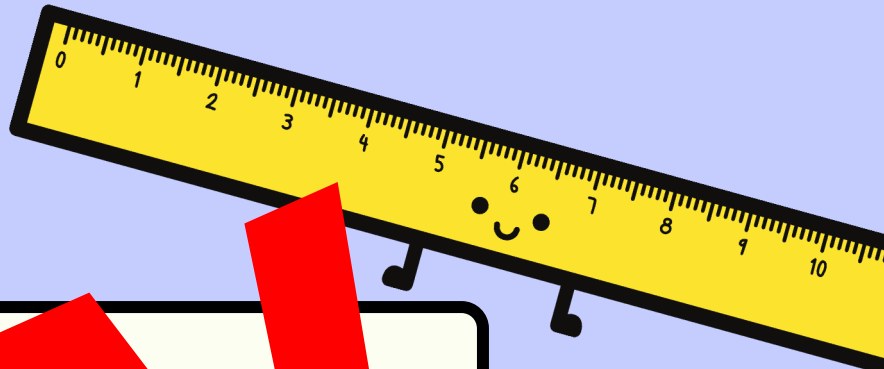
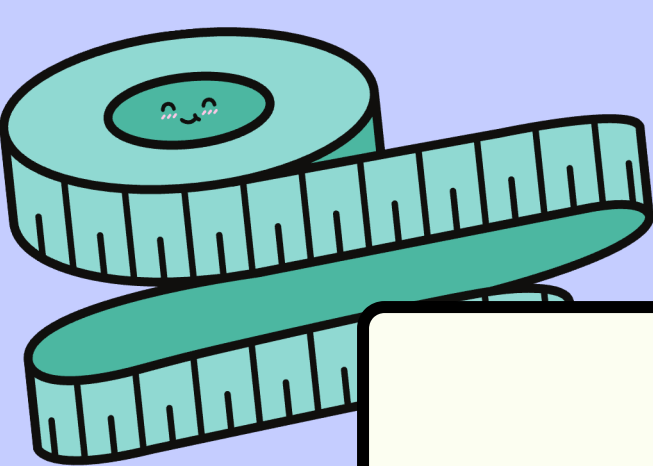
Near Doubles Yr2 Rubric



Student: _____

Date: _____

CRITERIA	BEGINNING	DEVELOPING	ACHIEVING	CONFIDENT	EXCEEDING
Recognises doubles	Needs support to match equal groups.	Recalls a few doubles with prompt.	Recalls common doubles accurately.	Recalls doubles quickly and flexibly.	Uses doubles across larger numbers.
Uses +1/-1 adjustment	Does not yet connect a near double.	Adjusts by 1 with step-by-step help.	Uses +1 or -1 for familiar facts.	Chooses the efficient adjustment independently.	Compares two valid double anchors.
Solves accurately	Answers are often incomplete.	Solves simple items with support.	Solves near doubles with support.	Solves varied near doubles accurately.	Extends the strategy to two-digit facts.
Explains strategy	Cannot yet describe the steps.	Names a double with a prompt.	States the strategy and adjustment.	Explains the strategy clearly with an equation.	Justifies and checks the strategy.



PREVIEW

**Neat
Doubles**



Learning Goal

I can solve word problems by
repeatedly adding a known double
and adjusting the total by 1



Warm-up: Doubles Facts

$$1 + 1 = 2 \quad 2 + 2 = 4 \quad 3 + 3 = 6$$

$$4 + 4 = 8 \quad 5 + 5 = 10$$

$$6 + 6 = 12 \quad 7 + 7 = 14$$

$$8 + 8 = 16 \quad 9 + 9 = 18 \quad 10 + 10 = 20$$



What Makes a Double?

A double has two equal addends.

$4 + 4$ is a double because both addends are 4.



What Is a Near Double?

A near double has two addends that differ by 1.

Examples: $4 + 5$ $7 + 8$ $10 + 9$



Double Plus One

Solve $5 + 5 + 1$.

$$5 + 5 = 10$$

One addend is 1 more, so add 1.

$$10 + 1 = 11$$



Double Minus One

Solve $8 + 8 - 1$.

$$8 + 8 = 16$$

One hundred is 1 less, so subtract 1.

$$16 - 1 = 15$$



Choose the Nearest Double

For $8 + 9$, either nearest double works.

$$8 + 8 = 16$$

$$9 + 9 - 1 = 17$$

Choose the double you recall fastest.



Think Aloud: $4 + 5$

1. Recall $4 + 4 = 8$.

2. The other addend is 1 more.

3. Add 1: $8 + 1 = 9$.

So, $4 + 5 = 9$.



Guided Practice: $6 + 7$

Say the known double.

$$6 + 6 = 12$$

7 is 1 more than 6.

$$12 + 1 = 13$$

$$\text{So, } 6 + 7 = 13.$$



Guided Practice: $9 + 8$

Use double 9 and subtract

$$9 + 9 = 18$$

$$18 - 1 = 17$$

So, $9 + 8 = 17$.



Quick Check

Solve each fact. Say the double you used.

$$3 + 4$$

$$5 + 6$$

$$7 + 8$$

$$9 + 10$$



Extend to Tens

$$20 + 2$$

$$20 + 20 = 40, \text{ then add } 1 \rightarrow 41$$

$$20 + 29$$

$$20 + 30 = 60, \text{ then subtract } 1 \rightarrow 59$$



Two-digit Challenge

$$40 + 39 = 40 + 40 - 1 = 79$$

$$50 + 51 = 50 + 50 + 1 = 101$$

The same near-doubles strategy works with tens.



Near Doubles Story

Luca builds 8 red towers and 8 blue towers.
How many towers does Luca build altogether?

$8 + 8 = 16$, then add 1.

Luca builds 17 towers.



Which Adjustment?

Double + 1

Use it when the second addend is 1 more.

Example: $7 + 8$

Double - 1

Use it when the second addend is 1 less.

Example: $7 + 6$



Review the Strategy

1. Find a nearby double.

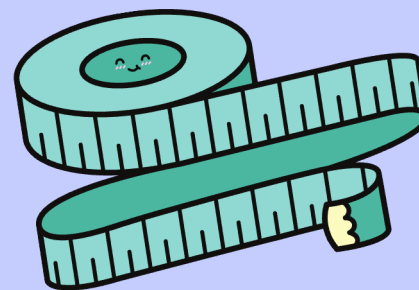
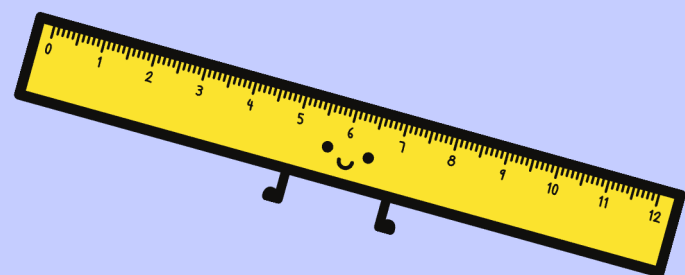
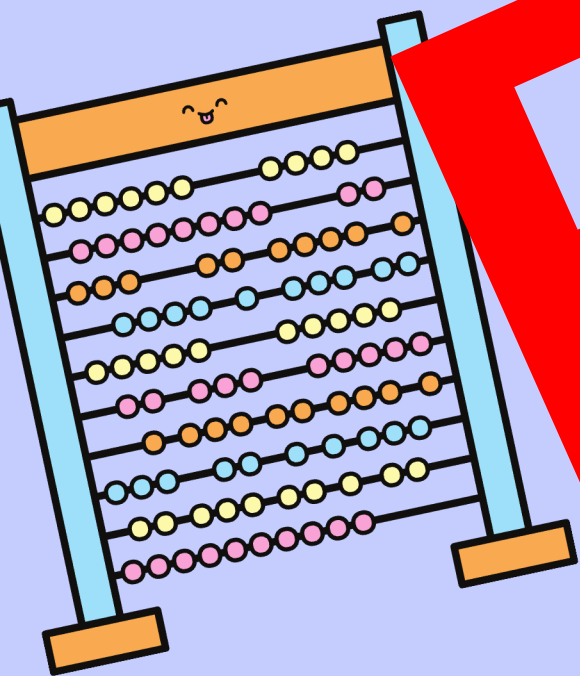
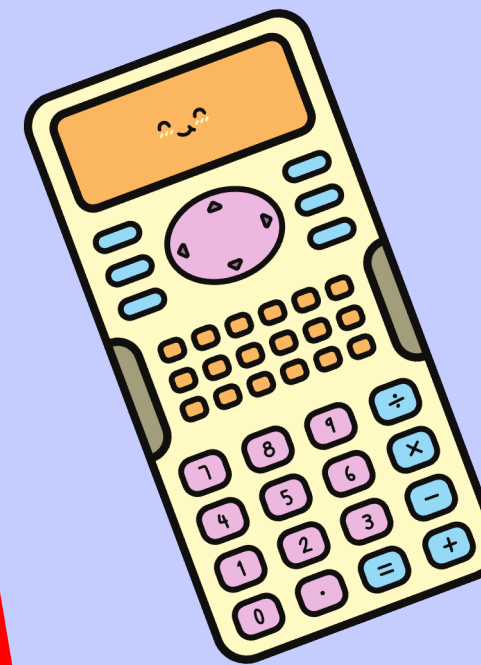
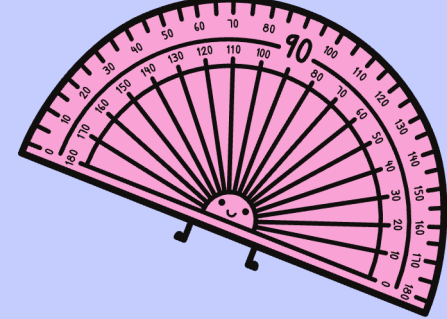
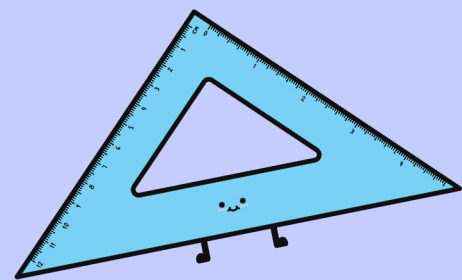
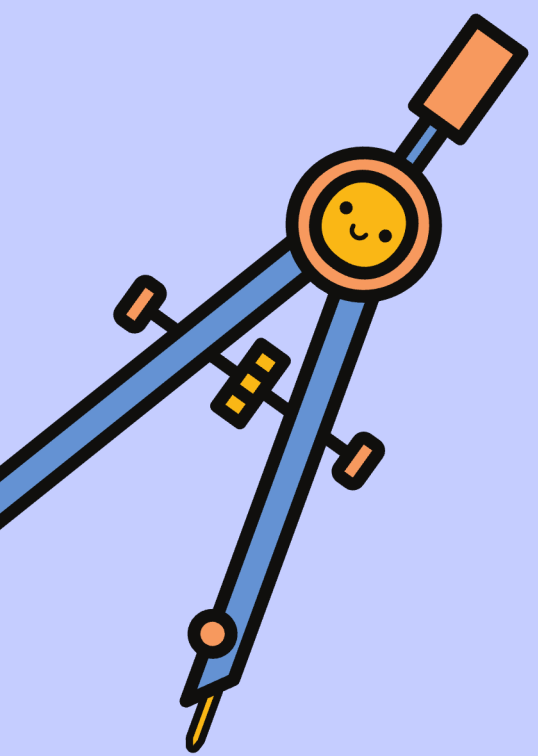
2. Double the double to get.

3. Adjust the total by 1.

Check that the answer is reasonable.

Say it: double, adjust, check!





Well Done!

PREVIEW

Near Doubles Quiz

PREVIEW



Question 1 – Multiple Choice

What is 4×5 ?

A. 8

B. 9

C. 10



Answer 1

PREVIEW

B. 9

Use $4 \times 2 = 8$, then add 1.



Question 2 – True or False

7 + 8 can be solved with
double 7, then add 1

True or False?



Answer 2

True

$$7 + 7 = 14$$

$$14 + 1 = 15$$



Question 3 – Short Answer

What is $6 - 5$?

Show the dot plot and the adjustment.



Answer 3

PREVIEW

11

$$6 + 6 = 12$$

$$12 - 1 = 11$$



Question 4 – Choose the Answer

Which known doubles facts you could use to solve $9 + 8$?

- A. $8 + 8$ B. $9 + 9$ C. $10 + 10$



Answer 4

$$4 \cdot 8 +$$

$$8 + 8 = 16$$

$$16 + 1 = 17$$



Question 5 – Short Answer

What is $10 + 11$?

Use a near double.



Answer 5

PREVIEW

$$21$$
$$10 + 10 = 20$$

$$20 + 1 = 21$$



Question 6 – True or False

2015-2016

True or False?



Answer 6

True

$$20 + 20 = 40$$

$$40 - 1 = 39$$



Question 7 – Word Problem

There are 6 red counters and 7 blue counters.

How many counters are there altogether?

A. 12

B. 13

C. 14



Answer 7

B. 13

$$6 + 6 = 12$$

$$12 + 1 = 13$$



Question 8 – Short Answer

PREVIEW

Who's 14 + 15?

Show the dot plot and the adjustment.



Answer 8

PREVIEW

$$29$$
$$14 + 14 = 28$$

$$28 + 1 = 29$$



Question 9 – Multiple Choice

Which equation shows $30 + 30$ as a number double?

A. $30 + 30 + 1$

B. $31 + 31 + 1$

C. $30 + 29 - 1$



Answer q

$$A = 20 + 30 + 1$$

$$30 + 30 = 60$$

$$60 + 1 = 61$$



Question 10 – Explain

Solve $8 + 9$ using a double

Write the double fact and explain

how you adjusted the total.



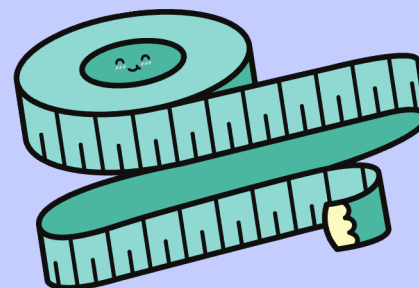
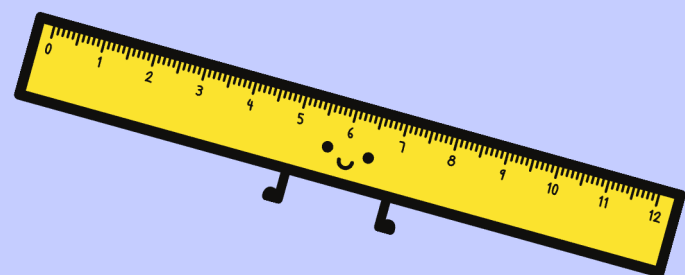
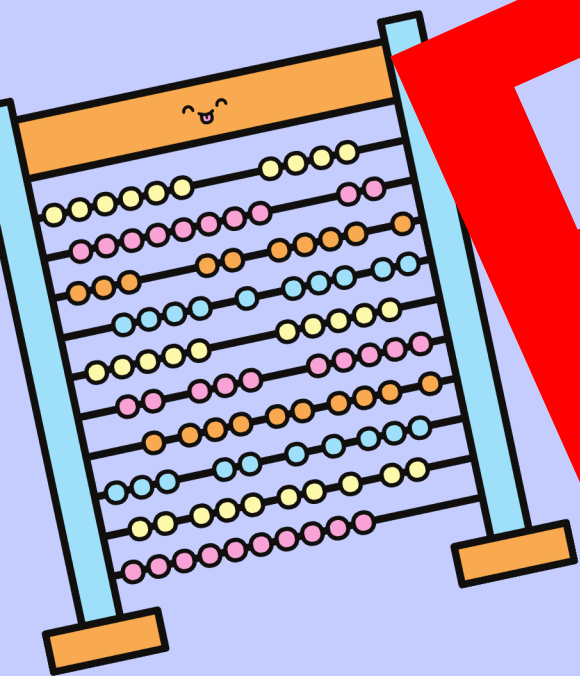
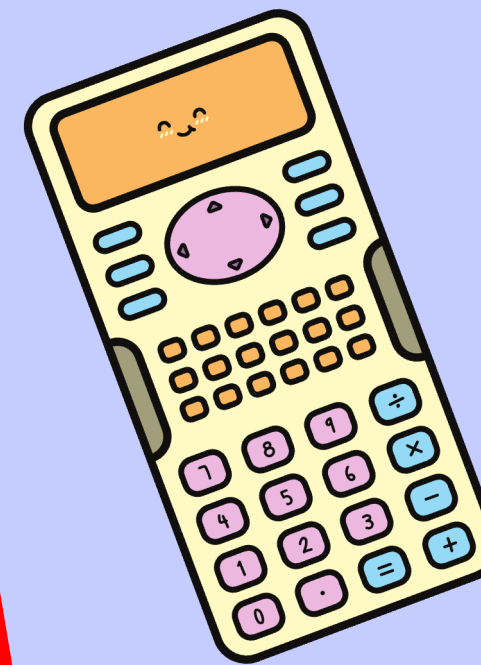
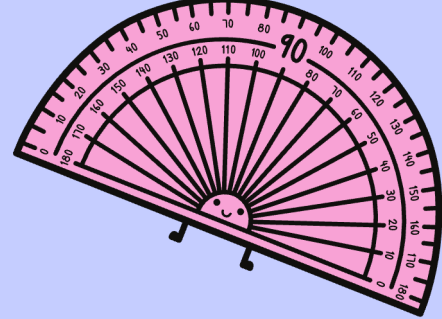
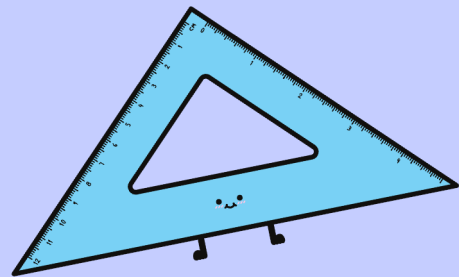
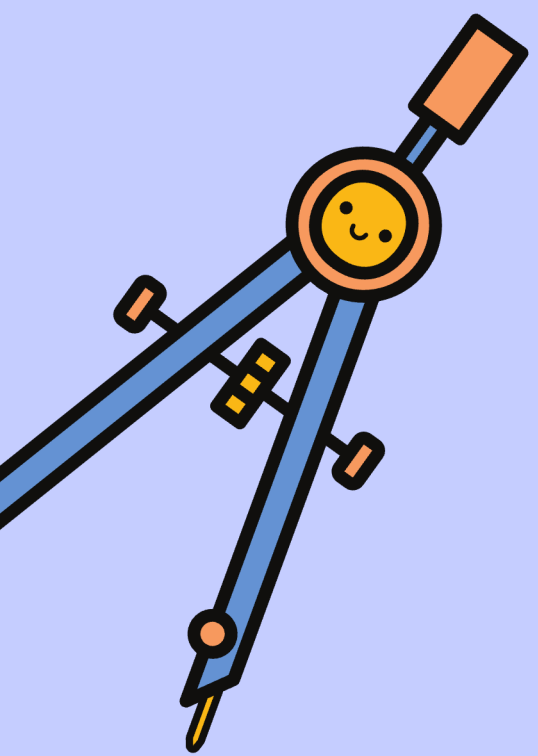
Answer 10

$8 + 8 = 1$ then add $1 \rightarrow 17$

9 could also use $9 + 9 = 18$,

then subtract $1 \rightarrow 17$.





Well Done!

PREVIEW