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Terrific Threes - Year 3

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TERRIFIC THREES

Multiply by 3 • Divide by 3



MULTIPLY BY 3

$$3 \times 1 = 3$$

$$3 \times 2 = 6$$

$$3 \times 3 = 9$$

$$3 \times 4 = 12$$

$$3 \times 5 = 15$$

$$3 \times 6 = 18$$

$$3 \times 7 = 21$$

$$3 \times 8 = 24$$

$$3 \times 9 = 27$$

$$3 \times 10 = 30$$

DIVIDE BY 3

$$3 \div 3 = 1$$

$$6 \div 3 = 2$$

$$9 \div 3 = 3$$

$$12 \div 3 = 4$$

$$15 \div 3 = 5$$

$$18 \div 3 = 6$$

$$21 \div 3 = 7$$

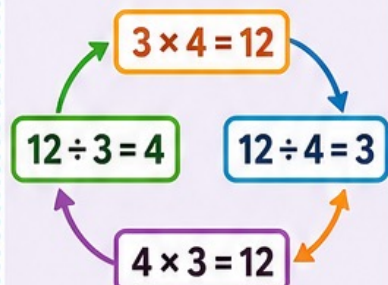
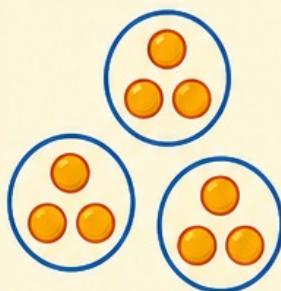
$$24 \div 3 = 8$$

$$27 \div 3 = 9$$

$$30 \div 3 = 10$$

Count in 3s • Build equal groups • Use arrays • Use fact families

3, 6, 9,
12, 15,
18, 21...



TERRIFIC THREES



$3 \times 1 = 3$

$3 \times 2 = 6$

$3 \times 3 = 9$

$3 \times 4 = 12$

$3 \times 5 = 15$

$3 \times 6 = 18$

$3 \times 7 = 21$

$3 \times 8 = 24$

$3 \times 9 = 27$

$3 \times 10 = 30$

$3 \div 3 = 1$

$6 \div 3 = 2$

$9 \div 3 = 3$

$12 \div 3 = 4$

$15 \div 3 = 5$

$18 \div 3 = 6$

$21 \div 3 = 7$

$24 \div 3 = 8$

$27 \div 3 = 9$

$30 \div 3 = 10$



Think: equal groups • array • skip counting • fact families



TERRIFIC THREES



$3 \times 1 = 3$

$3 \times 2 = 6$

$3 \times 3 = 9$

$3 \times 4 = 12$

$3 \times 5 = 15$

$3 \times 6 = 18$

$3 \times 7 = 21$

$3 \times 8 = 24$

$3 \times 9 = 27$

$3 \times 10 = 30$

$3 \div 3 = 1$

$6 \div 3 = 2$

$9 \div 3 = 3$

$12 \div 3 = 4$

$15 \div 3 = 5$

$18 \div 3 = 6$

$21 \div 3 = 7$

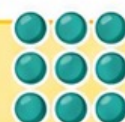
$24 \div 3 = 8$

$27 \div 3 = 9$

$30 \div 3 = 10$



Think: equal groups • arrays • skip counting • fact families



TRIPLE TRACK



HOW TO PLAY

1. Roll and move.
2. Solve the fact you land on.
3. Correct? Stay there. Not yet? Move back one space.

First player to
FINISH wins!





TRIPLE TRACK CHALLENGE CARDS



1. Solve 3×4 .



2. Solve $21 \div 3$.



3. Show an array for 3×6 .



4. Draw 5 groups of 3.
Write the fact.



5. Give the turn-around fact for 3×7 .



6. Write the fact family for 3, 8 and 24.



7. Find the missing number:
 $3 \times \square = 27$.



8. Find the missing number:
 $\square \div 3 = 6$.



9. True or false?
 $15 \div 3 = 5$.



10. Tell a sharing story for $24 \div 3$.



11. Continue:
3, 6, 9, 12, __, __.



12. How much greater is 3×8 than 3×7 ?



Cut apart. Draw one card when you land on a star.

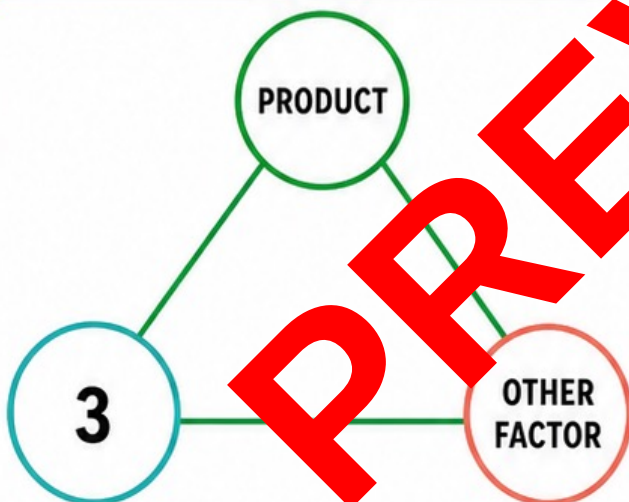


FACT FAMILY FLIP

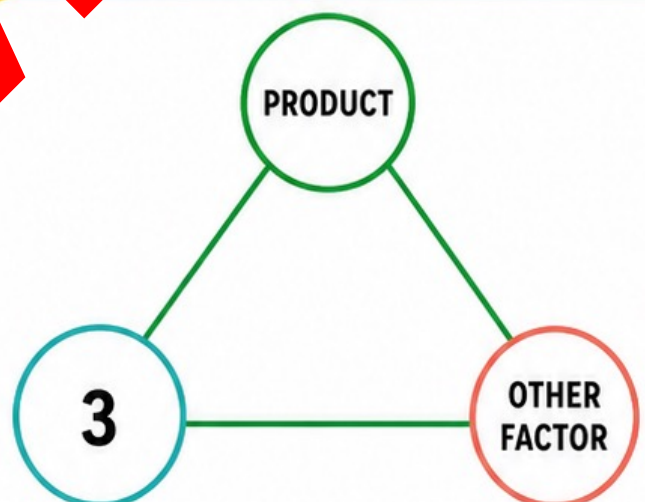
HOW TO PLAY

1. Shuffle the fact cards and place them face down.
2. Turn over one card.
3. Use 3, the other factor and the product to complete four related facts.
4. A partner checks. Keep the card if all four facts are correct.
5. The player with the most cards wins.

FACT FAMILY MAT



FACT FAMILY MAT



FACT FAMILY FLIP CARDS

OTHER FACTOR 1	PRODUCT 3
--------------------------	---------------------

OTHER FACTOR 2	PRODUCT 6
--------------------------	---------------------

OTHER FACTOR 3	PRODUCT 9
--------------------------	---------------------

OTHER FACTOR 4	PRODUCT 12
--------------------------	----------------------

OTHER FACTOR 5	PRODUCT 15
--------------------------	----------------------

OTHER FACTOR 6	PRODUCT 18
--------------------------	----------------------

OTHER FACTOR 7	PRODUCT 21
--------------------------	----------------------

OTHER FACTOR 8	PRODUCT 24
--------------------------	----------------------

OTHER FACTOR 9	PRODUCT 27
--------------------------	----------------------

OTHER FACTOR 10	PRODUCT 30
---------------------------	----------------------

★ Use 3, the other factor and the product to build four related facts. ★

WORKSHEET 1: BUILD THE THREES



Name: _____

Draw the equal groups. Then complete the repeated addition and multiplication fact.

1. Draw 2 groups of 3.

$3 + 3 = \underline{\quad}$

$2 \times 3 = \underline{\quad}$

2. Draw 4 groups of 3.

$3 + 3 + 3 + 3 = \underline{\quad}$

$4 \times 3 = \underline{\quad}$

3. Draw 6 groups of 3.

$3 + 3 + 3 + 3 + 3 + 3 = \underline{\quad}$

$6 \times 3 = \underline{\quad}$

4. Complete the connections.

$3 \text{ groups of } 3 = \underline{\quad}$

$3 + 3 + 3 = \underline{\quad}$

$3 \times 3 = \underline{\quad}$

5. Complete the connections.

$7 \text{ groups of } 3 = \underline{\quad}$

$7 \times 3 = \underline{\quad}$

6. Why does multiplying by 3 always make a multiple of 3?

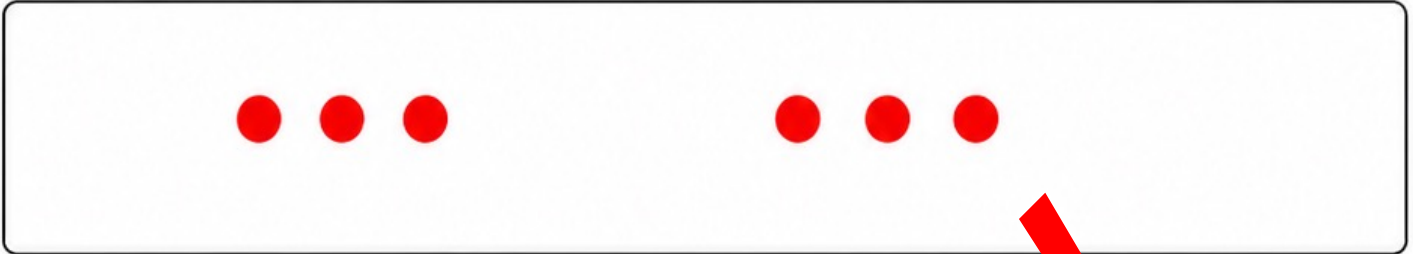
WORKSHEET 1: BUILD THE THREES



Name: _____ **ANSWERS**

Draw the equal groups. Then complete the repeated addition and multiplication fact.

1. Draw 2 groups of 3.



$$3 + 3 = \underline{6}$$

$$2 \times 3 = \underline{6}$$

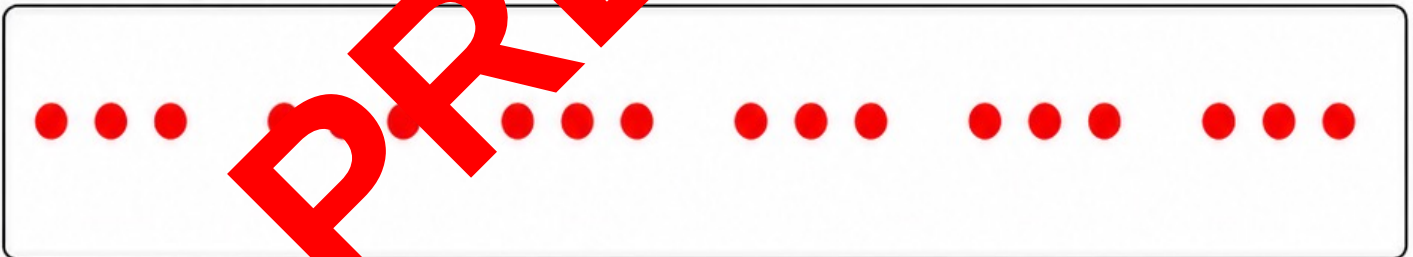
2. Draw 4 groups of 3.



$$3 + 3 + 3 + 3 = \underline{12}$$

$$4 \times 3 = \underline{12}$$

3. Draw 6 groups of 3.



$$3 + 3 + 3 + 3 + 3 + 3 = \underline{18}$$

$$6 \times 3 = \underline{18}$$

4. Complete the connections.

$$3 \text{ groups of } 3 = \underline{9}$$

$$3 + 3 + 3 = \underline{9}$$

$$3 \times 3 = \underline{9}$$

5. Complete the connections.

$$7 \text{ groups of } 3 = \underline{21}$$

$$7 \times 3 = \underline{21}$$

6. Why does multiplying by 3 always make a multiple of 3?

It combines equal groups of 3, so the total is made from threes.

WORKSHEET 2: SKIP COUNT AND CONNECT



Name: _____

Use the pattern of threes to solve each task.

1. Fill in the missing multiples of 3.

3	6		12		18		24		30
---	---	--	----	--	----	--	----	--	----

2. Complete the facts.

$3 \times 1 = \underline{\quad}$

$3 \times 2 = \underline{\quad}$

$3 \times 4 = \underline{\quad}$

$3 \times 5 = \underline{\quad}$

$3 \times 7 = \underline{\quad}$

$3 \times 8 = \underline{\quad}$

$3 \times 10 = \underline{\quad}$

3. Use a known fact.

a. $3 \times 5 = 15$, so $3 \times 6 = 15 + 3 = \underline{\quad}$

b. $3 \times 8 = 24$, so $3 \times 9 = 24 + 3 = \underline{\quad}$

c. $3 \times 4 = 12$, so $3 \times 3 = 12 - 3 = \underline{\quad}$

4. Circle every multiple of 3.

4 6 9 11 12 15 17 18 21 25 27 30

5. True or false? All multiples of 3 are odd.

Answer: _____

Explain: _____

WORKSHEET 2: SKIP COUNT AND CONNECT



Name: _____ **ANSWERS**

Use the pattern of threes to solve each task.

1. Fill in the missing multiples of 3.

3	6	9	12	15	18	21	24	27	30
---	---	----------	----	-----------	----	-----------	----	-----------	----

2. Complete the facts.

$$3 \times 1 = \underline{\mathbf{3}}$$

$$3 \times 2 = \underline{\mathbf{6}}$$

$$3 \times 4 = \underline{\mathbf{12}}$$

$$3 \times 5 = \underline{\mathbf{15}}$$

$$3 \times 7 = \underline{\mathbf{21}}$$

$$3 \times 8 = \underline{\mathbf{24}}$$

$$3 \times 10 = \underline{\mathbf{30}}$$

3. Use a known fact.

a. $3 \times 5 = 15$, so $3 \times 6 = 15 + 3 = \underline{\mathbf{18}}$

b. $3 \times 8 = 24$, so $3 \times 9 = 24 + 3 = \underline{\mathbf{27}}$

c. $3 \times 4 = 12$, so $3 \times 3 = 12 - 3 = \underline{\mathbf{9}}$

4. Circle every multiple of 3.

4 6 9 11 12 15 17 18 21 25 27 30

5. True or false? All multiples of 3 are odd.

Answer: **False**

Explain: **Some multiples of 3 are even, such as 6, 12 and 18.**

WORKSHEET 3A: ARRAYS AND TURNAROUNDS



Name: _____

Draw each array. Then complete its turnaround fact.

1. $3 \times 4 = 12$

Turnaround: ____ $\times$ ____ = ____

2. $3 \times 6 = 18$

Turnaround: ____ $\times$ ____ = ____

3. $5 \times 3 = 15$

Turnaround: ____ $\times$ ____ = ____

4. $3 \times 8 = 24$

Turnaround: ____ $\times$ ____ = ____

5. What stays the same when you turn an array around?

WORKSHEET 3A: ARRAYS AND TURNAROUNDS



Name: ANSWERS

Draw each array. Then complete its turnaround fact.

1. $3 \times 4 = 12$

3 rows of 4
counters = 12

Turnaround: 4 $\times$ 3 = 12

2. $3 \times 6 = 18$

3 rows of 6
counters = 18

Turnaround: 6 $\times$ 3 = 18

3. $5 \times 3 = 15$

5 rows of 3
counters = 15

Turnaround: 3 $\times$ 5 = 15

4. $3 \times 8 = 24$

3 rows of 8
counters = 24

Turnaround: 8 $\times$ 3 = 24

5. What stays the same when you turn an array around?

The number of counters and the product stay the same;
rows and columns swap.



WORKSHEET 3B: ARRAY REASONING

Name: _____

Draw, calculate and explain your thinking.

1. Mia arranges 21 counters in 3 equal rows. How many counters are in each row?

Fact: $\underline{\quad} \times \underline{\quad} = \underline{\quad}$

2. An array has 24 counters in 3 rows. How many columns does it have?

Fact: $\underline{\quad} \times \underline{\quad} = \underline{\quad}$

Turnaround: $\underline{\quad} \times \underline{\quad} = \underline{\quad}$

3. Leo draws 4 rows of 2. Zoe draws 3 rows of 4. Do their arrays show the same total? Explain.

4. Kai says $3 \times 7 = 18$. Find the mistake and write the correct fact.

Correct fact: $\underline{\quad} \times \underline{\quad} = \underline{\quad}$

5. Compare 3×8 and 3×9 . How does the total change? Why?



WORKSHEET 3B: ARRAY REASONING

Name: _____ **ANSWERS**

Draw, calculate and explain your thinking.

1. Mia arranges 21 counters in 3 equal rows. How many counters are in each row?

3 rows of 7 counters = 21

Fact: **3** × **7** = **21**

2. An array has 24 counters in 3 rows. How many columns does it have?

3 rows of 8 counters = 24

Fact: **3** × **8** = **24**

Turnaround: **8** × **3** = **24**

3. Leo draws 4 rows of 3. Zoe draws 3 rows of 4. Do their arrays show the same total? Explain.

Yes. $4 \times 3 = 12$ and $3 \times 4 = 12$. Turning the array swaps rows and columns.

4. Kai says $3 \times 7 = 18$. Find the mistake and write the correct fact.

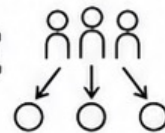
18 is 3×6 , not 3×7 .

Correct fact: **3** × **7** = **21**

5. Compare 3×8 and 3×9 . How does the total change? Why?

The total increases by 3, from 24 to 27, because one more group of 3 is added.

WORKSHEET 4A: SHARE AND GROUP BY THREE



Name: _____

Draw a model, solve the division fact and label your answer.

1. Eighteen stickers are shared equally among 3 children. How many stickers does each child get?

$$18 \div 3 = \underline{\quad} \text{ stickers each}$$

2. Twenty-four counters are placed into groups of 3. How many groups are made?

$$24 \div 3 = \underline{\quad} \text{ groups}$$

3. Fifteen muffins are shared equally among 3 plates. How many muffins go on each plate?

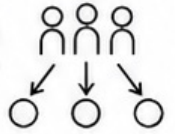
$$15 \div 3 = \underline{\quad} \text{ muffins each}$$

4. Twenty-one shells are shared equally among 3 buckets. How many shells go in each bucket?

$$21 \div 3 = \underline{\quad} \text{ shells each}$$

5. What is the difference between sharing into 3 equal groups and making groups of 3?

WORKSHEET 4A: SHARE AND GROUP BY THREE



Name: _____ **ANSWERS**

Draw a model, solve the division fact and label your answer.

1. Eighteen stickers are shared equally among 3 children. How many stickers does each child get?

3 equal groups with 6 stickers in each group

$$18 \div 3 = \underline{6} \text{ stickers each}$$

2. Twenty-four counters are placed into groups of 3. How many groups are made?

8 groups with 3 counters in each group

$$24 \div 3 = \underline{8} \text{ groups}$$

3. Fifteen muffins are shared equally among 3 plates. How many muffins go on each plate?

3 plates with 5 muffins on each plate

$$15 \div 3 = \underline{5} \text{ muffins each}$$

4. Twenty-one shells are shared equally among 3 buckets. How many shells go in each bucket?

3 buckets with 7 shells in each bucket

$$21 \div 3 = \underline{7} \text{ shells each}$$

5. What is the difference between sharing into 3 equal groups and making groups of 3?

— **Sharing into 3 groups asks how many are in each group.** _____

— **Making groups of 3 asks how many groups can be made.** _____

WORKSHEET 4B: DIVISION AND MISSING NUMBERS



Name: _____

Use multiplication facts to solve each division problem.

1. Complete the division facts.

$3 \div 3 = \underline{\quad}$

$6 \div 3 = \underline{\quad}$

$9 \div 3 = \underline{\quad}$

$12 \div 3 = \underline{\quad}$

$15 \div 3 = \underline{\quad}$

$18 \div 3 = \underline{\quad}$

$21 \div 3 = \underline{\quad}$

$24 \div 3 = \underline{\quad}$

$27 \div 3 = \underline{\quad}$

$30 \div 3 = \underline{\quad}$

2. Find each missing number.

$\underline{\quad} \div 3 = 4$

$18 \div \underline{\quad} = 6$

$24 \div 3 = \underline{\quad}$

$\underline{\quad} \times \underline{\quad} = 21$

$\underline{\quad} \times 3 = 27$

$30 \div \underline{\quad} = 10$

3. Use the inverse rule.

$3 \times 8 = 24$, so $24 \div 3 = \underline{\quad}$ and $24 \div 8 = \underline{\quad}$

4. Error check.

Amir says $27 \div 3 = 8$.

Is Amir correct? _____

Explain: _____

5. Write the fact family for 3, 6 and 18.

$\underline{\quad} \times \underline{\quad} = \underline{\quad}$

$\underline{\quad} \div \underline{\quad} = \underline{\quad}$

$\underline{\quad} \times \underline{\quad} = \underline{\quad}$

$\underline{\quad} \div \underline{\quad} = \underline{\quad}$

WORKSHEET 4B: DIVISION AND MISSING NUMBERS



Name: _____ **ANSWERS**

Use multiplication facts to solve each division problem.

1. Complete the division facts.

$3 \div 3 = \underline{1}$

$6 \div 3 = \underline{2}$

$9 \div 3 = \underline{3}$

$12 \div 3 = \underline{4}$

$15 \div 3 = \underline{5}$

$18 \div 3 = \underline{6}$

$21 \div 3 = \underline{7}$

$24 \div 3 = \underline{8}$

$27 \div 3 = \underline{9}$

$30 \div 3 = \underline{10}$

2. Find each missing number.

$\underline{12} \div 3 = 4$

$18 \div \underline{3} = 6$

$24 \div 3 = \underline{8}$

$3 \times \underline{7} = 21$

$\underline{9} \times 3 = 27$

$30 \div \underline{3} = 10$

3. Use the inverse facts.

$3 \times 8 = 24$, so $24 \div 3 = \underline{8}$ and $24 \div 8 = \underline{3}$

4. Error check.

Amir says $27 \div 3 = 8$.

Is Amir correct? **No**

Explain: **$27 \div 3 = 9$ because $3 \times 9 = 27$.**

5. Write the fact family for 3, 6 and 18.

$\underline{3} \times \underline{6} = \underline{18}$

$\underline{18} \div \underline{3} = \underline{6}$

$\underline{6} \times \underline{3} = \underline{18}$

$\underline{18} \div \underline{6} = \underline{3}$

WORKSHEET 5A: THREES FACT FAMILIES



Name: _____



1. Write the fact family for 3, 4 and 12.

$$\square \times \square = \square \quad \square \times \square = \square$$

$$\square \div \square = \square \quad \square \div \square = \square$$

2. Write the fact family for 3, 7 and 21.

$$\square \times \square = \square \quad \square \times \square = \square$$

$$\square \div \square = \square \quad \square \div \square = \square$$

3. Find each missing number.

$$3 \times \square = 24$$

$$\square \times 3 = 27$$

$$18 \div 3 = \square$$

$$30 \div \square = 10$$

4. Match each multiplication fact to its related division fact.

Draw matching lines.

$$3 \times 5 = 15$$

$$27 \div 9 = 3$$

$$3 \times 9 = 27$$

$$15 \div 3 = 5$$

5. Explain: How can one multiplication fact help you solve two division facts?

WORKSHEET 5A: THREES FACT FAMILIES



Name: _____

ANSWERS

1. Write the fact family for 3, 4 and 12.

$$3 \times 4 = 12$$

$$4 \times 3 = 12$$

$$12 \div 3 = 4$$

$$12 \div 4 = 3$$

2. Write the fact family for 3, 7 and 21.

$$3 \times 7 = 21$$

$$7 \times 3 = 21$$

$$21 \div 3 = 7$$

$$21 \div 7 = 3$$

3. Find each missing number.

$$3 \times 8 = 24$$

$$9 \times 3 = 27$$

$$18 \div 3 = 6$$

$$30 \div 3 = 10$$

4. Match each multiplication fact to its related division fact.

Draw matching lines.

$$3 \times 5 = 15$$

$$27 \div 9 = 3$$

$$3 \times 9 = 27$$

$$15 \div 3 = 5$$

5. Explain: How can one multiplication fact help you solve two division facts?

A multiplication fact gives the whole and its equal groups.

Reverse it to divide by either factor.

WORKSHEET 5B: THREES WORD PROBLEMS

Name: _____



- 1** Eight bags hold 3 marbles each. How many marbles are there altogether?

Number sentence: _____

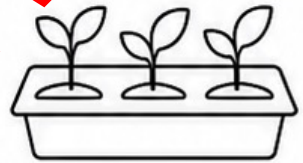
Answer: _____



- 2** Twenty-seven seedlings are shared equally among 9 trays.
How many seedlings go in each tray?

Number sentence: _____

Answer: _____



- 3** Twenty-one flags are put into bundles of 3.
How many bundles are made?

Number sentence: _____

Answer: _____



- 4** Compare $24 \div 6$ and $24 \div 3$. Find both values. Are the values equal? Explain.



- 5** Write your own word problem for $30 \div 3 = 10$.



WORKSHEET 5B: THREES WORD PROBLEMS

Name: _____ **ANSWERS**



- 1** Eight bags hold 3 marbles each. How many marbles are there altogether?

Number sentence: $8 \times 3 = 24$

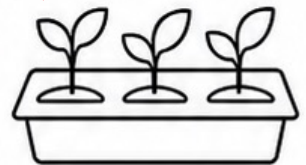
Answer: 24 marbles



- 2** Twenty-seven seedlings are shared equally among 3 trays.
How many seedlings go in each tray?

Number sentence: $27 \div 3 = 9$

Answer: 9 seedlings



- 3** Twenty-one flags are put into bundles of 3.
How many bundles are made?

Number sentence: $21 \div 3 = 7$

Answer: 7 bundles



- 4** Compare 3×6 and $24 \div 3$. Find both values. Are the values equal? Explain.

$3 \times 6 = 18$ and $24 \div 3 = 8$.

No. The values are not equal because $18 \neq 8$.



- 5** Write your own word problem for $30 \div 3 = 10$.

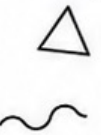
30 pencils are shared equally among 3 students.

How many pencils does each student get? 10 pencils.





TERRIFIC THREES ASSESSMENT — PAGE 1



Name: _____

Date: _____

1. Draw equal groups to show 3×4 . Then complete: $3 \times 4 = \underline{\quad}$ (2 marks)

2. Complete the skip-counting pattern: (2 marks)

3, 6, , 12, , 18, , 24, , 30

3. Complete: (3 marks)

a) $3 \times 5 = \underline{\quad}$

b) $3 \times 7 = \underline{\quad}$

c) $3 \times 9 = \underline{\quad}$

4. Use the turnaround fact: (1 mark)

$3 \times 8 = 24$, so $8 \times 3 = \underline{\quad}$

5. Mia knows $3 \times 6 = 18$. Explain how this helps her find 3×7 . (2 marks)

Total: / 10



TERRIFIC THREES ASSESSMENT — PAGE 1

Name: _____ **ANSWERS** Date: _____

1. Draw equal groups to show 3×4 . Then complete: $3 \times 4 =$ 12 (2 marks)

3 equal groups of 4 = 12

2. Complete the skip-counting pattern: (2 marks)

3, 6, 9, 12, 15, 18, 21, 24, 27, 30

3. Complete: (3 marks)

a) $3 \times 5 =$ 15

b) $3 \times 7 =$ 21

c) $3 \times 9 =$ 27

4. Use the turnaround fact: (1 mark)

$3 \times 8 = 24$, so $8 \times 3 =$ 24

5. Mia knows $3 \times 6 = 18$. Explain how this helps her find 3×7 . (2 marks)

Add one more group of 3 to 18.

$18 + 3 = 21$, so $3 \times 7 = 21$.

Total: ____ / 10

TERRIFIC THREES ASSESSMENT – PAGE 2

Name: _____

Date: _____

1. Complete:

a) $12 \div 3 = \underline{\quad}$

b) $21 \div 3 = \underline{\quad}$

c) $30 \div 3 = \underline{\quad}$

(3 marks)

2. Find the missing number:

a) $3 \times \underline{\quad} = 18$

b) $24 \div \underline{\quad} = 8$

(2 marks)

3. Write the four facts in the fact family for 3 and 24.

$\underline{\quad} \times \underline{\quad} = \underline{\quad}$ $\underline{\quad} \times \underline{\quad} = \underline{\quad}$

$\underline{\quad} \div \underline{\quad} = \underline{\quad}$ $\underline{\quad} \div \underline{\quad} = \underline{\quad}$

(2 marks)

4. Twenty-four stickers are shared equally among 3 students. How many stickers does each student get?

Number sentence: _____

Answer: _____

(1 mark)

5. Noah says $18 \div 3 = 5$. Is Noah correct? Explain how you know.

(2 marks)

Total: _____ / 10

TERRIFIC THREES ASSESSMENT – PAGE 2

Name: _____ **ANSWERS** Date: _____

1. Complete:

a) $12 \div 3 = \underline{4}$

b) $21 \div 3 = \underline{7}$

c) $30 \div 3 = \underline{10}$

(3 marks)

2. Find the missing number:

a) $3 \times \underline{6} = 18$

b) $24 \div \underline{3} = 8$

(2 marks)

3. Write the four facts in the fact family for 3 and 24.

$\underline{3} \times \underline{8} = \underline{24}$ $\underline{8} \times \underline{3} = \underline{24}$

$\underline{24} \div \underline{3} = \underline{8}$ $\underline{24} \div \underline{8} = \underline{3}$

(2 marks)

4. Twenty-four stickers are shared equally among 3 students. How many stickers does each student get?

Number sentence: $\underline{24 \div 3 = 8}$

Answer: $\underline{8 \text{ stickers}}$

(1 mark)

5. Noah says $18 \div 3 = 5$. Is Noah correct? Explain how you know.

$\underline{\text{No. } 18 \div 3 = 6.}$

$\underline{\text{Three groups of 6 make 18 because } 3 \times 6 = 18.}$

(2 marks)

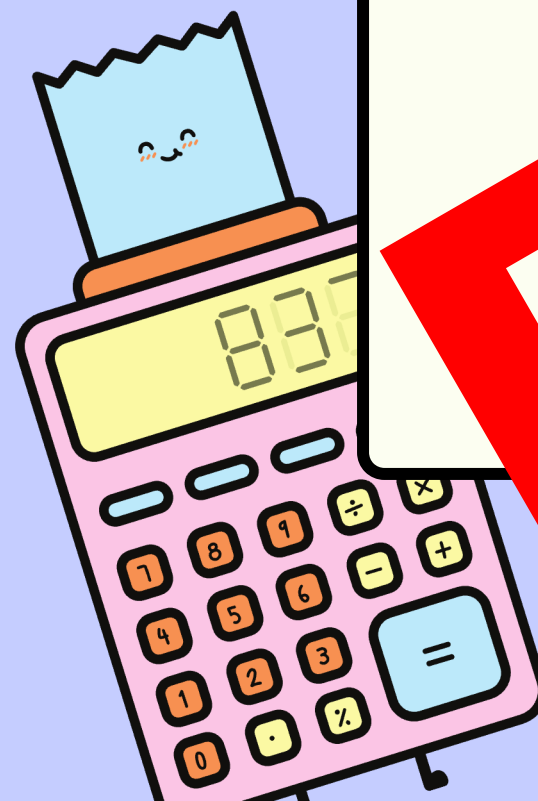
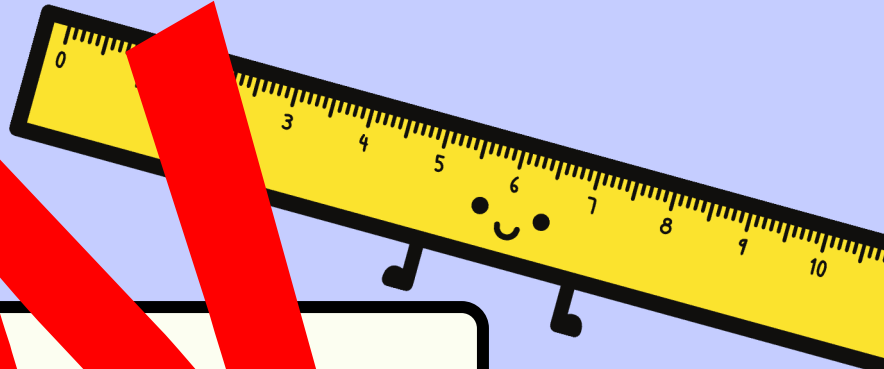
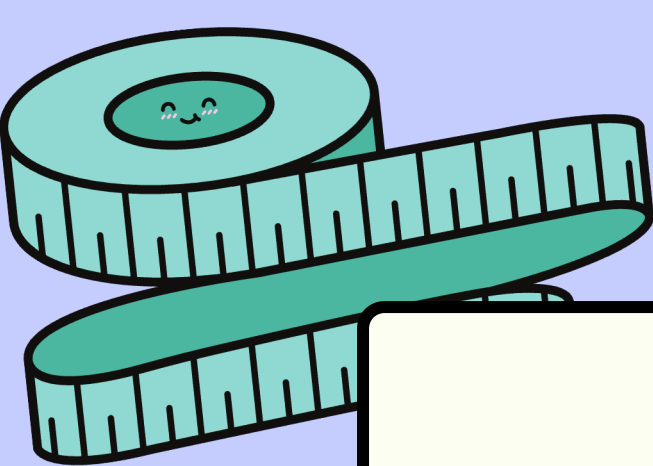
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TERRIFIC THREES RUBRIC

Student: _____

Date: _____

CRITERIA	BEGINNING	DEVELOPING	ACHIEVING	CONFIDENT	EXCEEDING
Represents equal groups and arrays	Needs support to show equal groups.	Shows some equal groups; needs prompting.	Shows accurate equal groups and arrays.	Chooses and labels a clear model.	Connects models and explains why they match.
Recalls 3s multiplication and division	Recalls a few facts with support.	Recalls some facts using a strategy.	Accurately recalls facts up to 30.	Works fluently and checks division.	Applies facts flexibly in new tasks.
Uses fact families and inverse operations	Needs support to connect facts.	Completes some related facts.	Writes complete fact families.	Uses inverse facts to find unknowns.	Explains and applies inverse relationships.
Solves and explains problems	Needs support to begin a problem.	Selects an operation with prompting.	Solves routine problems accurately.	Explains strategy with clear evidence.	Compares strategies and justifies choices.



PREVIEW

Tenrifles threes



Learning Goal

We are learning to:

- recognise and represent equal groups of 3
- multiply and divide using three facts
- connect arrays, turnarounds and fact families

Success means I can model, solve and explain.



Multiplication Describes Equal Groups

3×4 means 3 equal groups of 4.

$$4 + 4 + 4 = 12$$

So, $3 \times 4 = 12$.

The factors tell the number of groups and how many are in each group.



Spot the Threes Pattern

Count forwards by 3:

3, 6, 9, 12, 15, 18, 21, 24, 27, 30

Each number is 3 more than the number before it.

These are the first ten products in the 3s facts.



Repeated Addition Builds a Fact

To find 3×5 , add five groups of 3:

$$3 + 3 + 3 + 3 + 3 = 15$$

Therefore, $3 \times 5 = 15$.

Multiplication is shorter way to record repeated equal groups.



Skip Count to Find Products

For 3×7 , make seven jumps of 3:

$3 \rightarrow 6 \rightarrow 9 \rightarrow 12 \rightarrow 15 \rightarrow 18 \rightarrow 21$

The seventh number is

So, $3 \times 7 = 21$.



Arrays Show Equal Rows and Columns

An array for 3×4 can have:

- 3 rows
- 4 in each row
- 12 altogether

Rows and columns stay equal, so the total is easy to see and check.



Turnaround Facts

Turning an array swaps the factors but keeps the product.

$$3 \times 6 = 18$$

$$6 \times 3 = 18$$

This is the commutative property of multiplication.



Build the 3s Facts

$3 \times 1 = 3$

$3 \times 6 = 18$

$3 \times 2 = 6$

$3 \times 7 = 21$

$3 \times 3 = 9$

$3 \times 8 = 24$

$3 \times 4 = 12$

$3 \times 9 = 27$

$3 \times 5 = 15$

$3 \times 10 = 30$

Put the cards forwards, backwards and in a mixed order.



Use a Known Fact

If you know $3 \times 6 = 18$, then add one more group of 3.

$$18 + 3 = 21$$

So, $3 \times 7 = 21$.

Known fact + one more group of 3 = next threes fact.



Multiplication Practice

Solve each fact.

$3 \times 4 = \underline{\quad}$

$3 \times 7 = \underline{\quad}$

$3 \times \quad = \underline{\quad}$

$3 \times 2 = \underline{\quad}$

$3 \times 9 = \underline{\quad}$

$3 \times 5 = \underline{\quad}$

$3 \times 8 = \underline{\quad}$

$3 \times \quad = \underline{\quad}$

$3 \times 6 = \underline{\quad}$

$7 \times 3 = \underline{\quad}$

$4 \times 3 = \underline{\quad}$

$9 \times \quad = \underline{\quad}$

$3 \times \quad = \underline{\quad}$

$8 \times \quad = \underline{\quad}$

$6 \times 3 = \underline{\quad}$



Multiplication Practice – Answer

$3 \times 4 = 12$

$3 \times 7 = 21$

$3 \times 10 = 30$

$3 \times 2 = 6$

$3 \times 9 = 27$

$3 \times 5 = 15$

$3 \times 8 = 24$

$3 \times 3 = 9$

$3 \times 6 = 18$

$7 \times 3 = 21$

$4 \times 3 = 12$

$9 \times 3 = 27$

$3 \times 1 = 3$

$8 \times 3 = 24$

$6 \times 3 = 18$

Check: every answer is a multiple of 3.



Division as Sharing

Eighteen counters are shared equally among 3 children.

$$18 \div 3 = 6$$

Each child receives 6 counters.

Sharing 18 counters into 3 equal groups shows how many are in each equal group.



Division as Grouping

Twenty-one counters are placed into groups of 3.

$$21 \div 3 = 7$$

There are 7 groups.

Grouping tells us how many equal groups can be made.



One Array, Four Related Facts

An array with 3 rows of 8 has 24 items.

$$3 \times 8 = 24$$

$$8 \times 3 = 24$$

$$24 \div 3 = 8$$

$$24 \div 8 = 3$$

The same array supports multiplication and division.



Fact Families

Use 3, 7 and 21 to write four related facts:

$$3 \times 7 = 21 \quad 7 \times 3 = 21$$

$$21 \div 3 = 7 \quad 21 \div 7 = 3$$

All four facts describe the same relationship.



Use Inverse Facts to Find Unknowns

Find the missing number: $3 \times \underline{\quad} = 24$

Use the inverse fact:

$$24 \div 3 = 8$$

Therefore, $3 \times \underline{8} = 24$.

Multiplication and division undo each other.



Division Practice

Solve each fact.

$3 \div 3 = \underline{\quad}$

$6 \div 3 = \underline{\quad}$

$9 \div 3 = \underline{\quad}$

$12 \div 3 = \underline{\quad}$

$15 \div 3 = \underline{\quad}$

$18 \div 3 = \underline{\quad}$

$21 \div 3 = \underline{\quad}$

$24 \div 3 = \underline{\quad}$

$27 \div 3 = \underline{\quad}$

$30 \div 3 = \underline{\quad}$

$8 \div 6 = \underline{\quad}$

$20 \div 5 = \underline{\quad}$

$21 \div 7 = \underline{\quad}$

$24 \div 9 = \underline{\quad}$

$30 \div 10 = \underline{\quad}$



Division Practice – Answers

$3 \div 3 = 1$

$6 \div 3 = 2$

$9 \div 3 = 3$

$12 \div 3 = 4$

$15 \div 3 = 5$

$18 \div 3 = 6$

$21 \div 3 = 7$

$24 \div 3 = 8$

$27 \div 3 = 9$

$30 \div 3 = 10$

$18 \div 6 = 3$

$24 \div 8 = 3$

$21 \div 7 = 3$

$27 \div 9 = 3$

$30 \div 10 = 3$

Check each answer with multiplication.



Mixed Practice

Complete each fact or missing number.

$3 \times 8 = \underline{\quad}$

$24 \div 3 = \underline{\quad}$

$\underline{\quad} \times 3 = 15$

$27 \div \underline{\quad} = 9$

$3 \times \underline{\quad} = 30$

$6 \times 3 = \underline{\quad}$

$\underline{\quad} \div 4 = 6$

$18 \div \underline{\quad} = 6$

$\underline{\quad} \times 9 = 81$



Mixed Practice – Answers

$$3 \times 8 = 24 \qquad 24 \div 3 = 8$$

$$5 \times 3 = 15 \qquad 27 \div 3 = 9$$

$$3 \times 10 = 30 \qquad 21 \div 3 = 7$$

$$6 \times 3 = 18 \qquad 12 \div 3 = 4$$

$$18 \div 6 = 3 \qquad 3 \times 6 = 18$$

Use related multiplication facts to check each division.



Word Problems

1. Eight packets hold 3 stickers each. How many stickers are there altogether?

2. Twenty-seven shells are shared equally among 3 groups. How many shells are in each group?

Choose the operation, write an equation and explain what the answer means.



Word Problems – Answers

1. $8 \times 3 = 24$

There are 24 stickers altogether.

2. $27 \div 3 = 9$

There are 9 shells in each group.

3. $3 \times 2 = 6$



Terrific Threes Strategy Summary

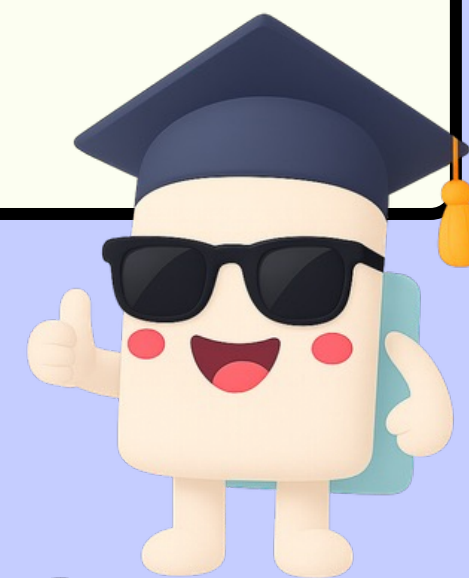
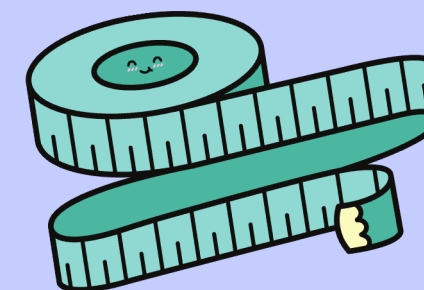
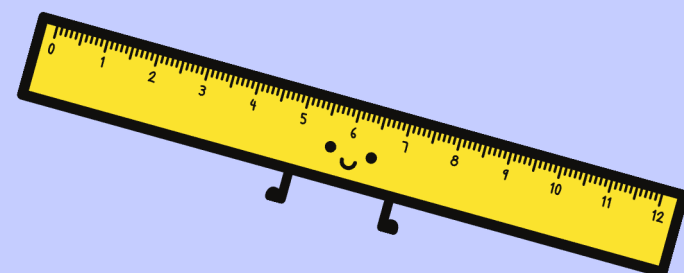
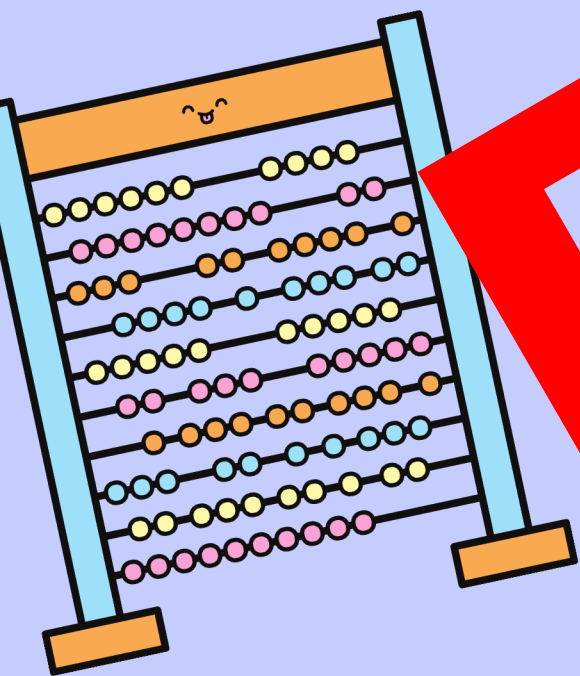
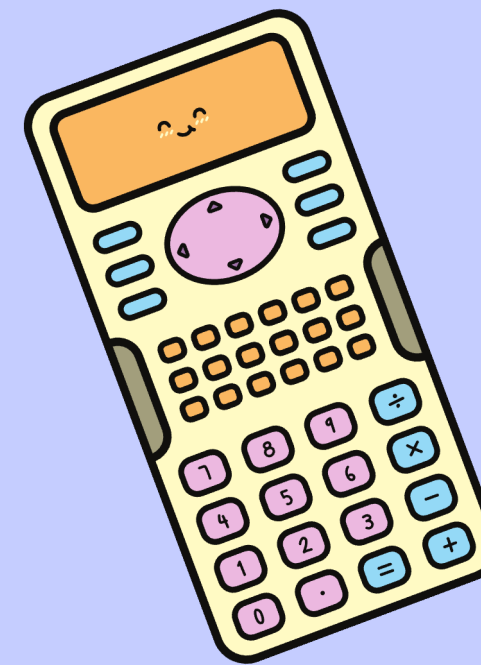
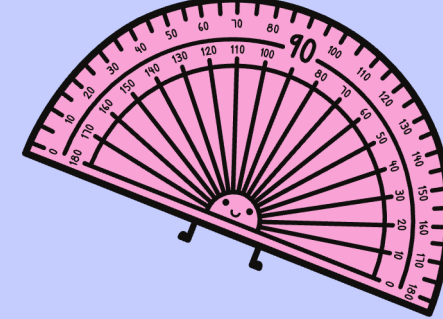
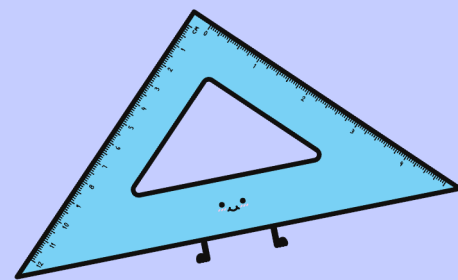
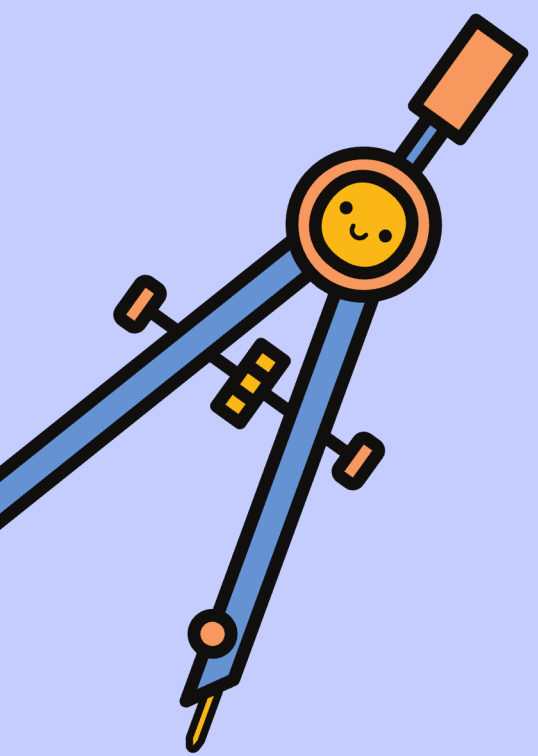
REPRESENT equal groups with objects, jumps on a number line.

SOLVE by skip-counting, repeated addition, or a known fact.

CHECK division with its inverse multiplication fact.

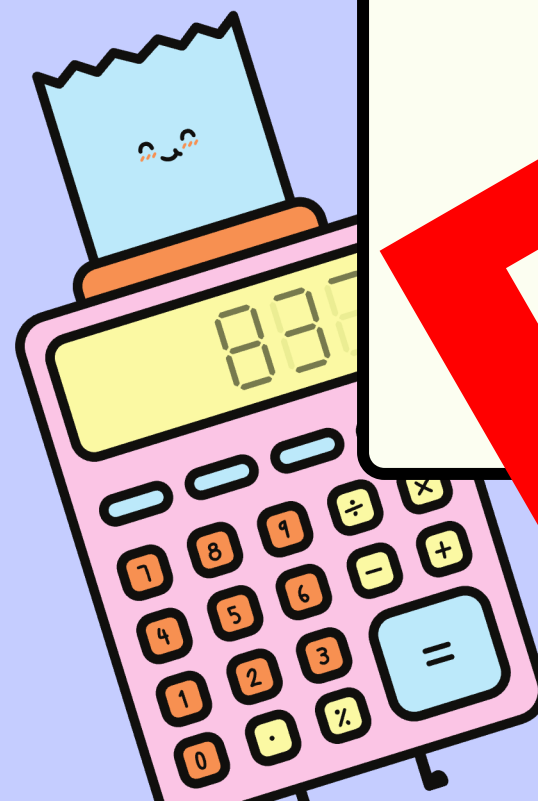
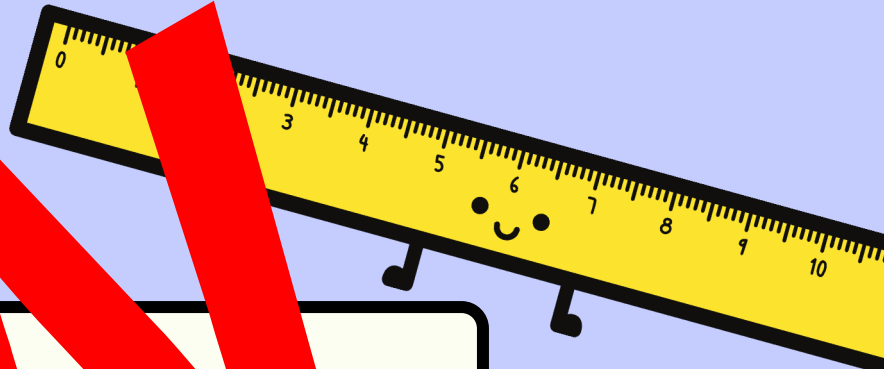
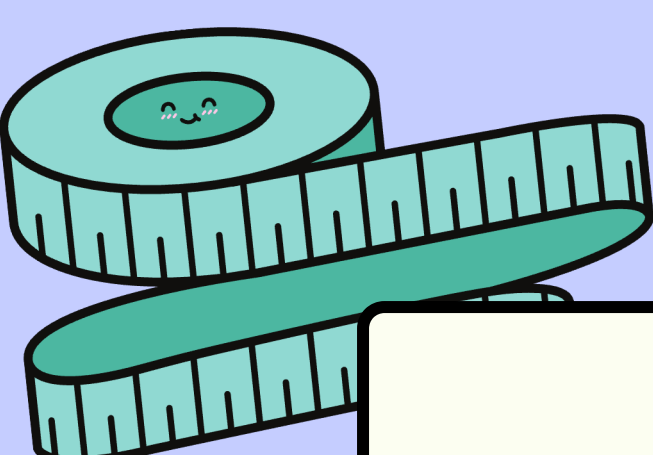
EXPLAIN what the number and answer mean.





PREVIEW

Well Done!



PREVIEW

Terrific Threes

Quiz

A cartoon character of a notepad with a face, wearing a blue graduation cap with a gold tassel, and holding a yellow pencil.

Question 1 – True or False

The product of 3×6 is 18.

TRUE or FALSE?



Answer 1

TRUE

$3 \times 6 = 18$ because six groups of 3 total 18.



Question 2 – Short Answer

Complete the skip-counting pattern.

3, 6, 9, _____, _____



Answer 2

12, 15

The pattern increases by 3 each time.



Question 3 – Multiple Choice

Which array could show 3×5 ?

- A. 3 rows of 5
- B. 2 rows of 5
- C. 3 rows of 4
- D. 5 rows of 5



Answer 3

A. 3 rows of 5

Three equal rows with five in each row to 15.



Question 4 – Short Answer

Use the turnaround fact.

$3 \times 8 = 24$, so $8 \times 3 =$ _____



Answer 4

24

Swapping the factors does not change the product.



Question 5 – Multiple Choice

What is 3×9 ?

- A. 18
- B. 21
- C. 27
- D. 30



Answer 5

C. 27

Count nine groups of 3: 3, 6, 9, 12, 15, 18, 21, 24, 27.



Question 6 – True or False

$$21 \div 3 = 8$$

TRUE or FALSE?

PREVIEW



Answer 6

FALSE

$21 \div 3 = 7$ because $3 \times 7 = 21$.



Question 7 – Short Answer

Twenty-four counters are shared equally among 3 groups.

How many counters are in each group?



Answer 7

8 counters

$$24 \div 3 = 8.$$



Question 8 – Multiple Choice

Which fact belongs to the same fact family as $7 \times 4 = 28$?

A. $21 \div 3 = 7$

B. $21 \div 7 = 4$

C. $18 \div 3 = 6$

D. $3 \times 8 = 24$



Answer 8

A. $21 \div 3 = 7$

It uses the same three numbers: 3, 7 and 21



Question 9 – Short Answer

Find the missing number.

$$3 \times \underline{\quad} = 30$$



Answer q

10

$30 \div 3 = 10$, so $3 \times 10 = 30$



Question 10 – Word Problem

Eight boxes hold 3 pieces of chalk each.

How many pieces of chalk are there altogether?

Write an equation and answer.

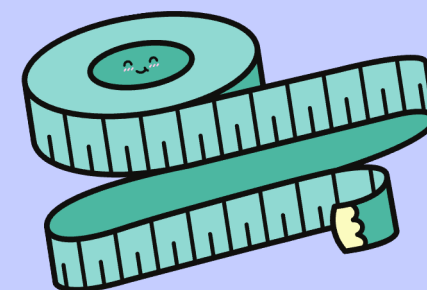
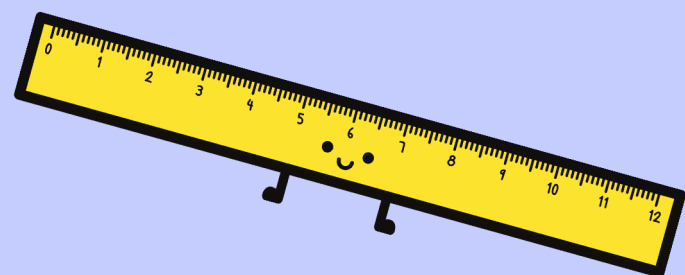
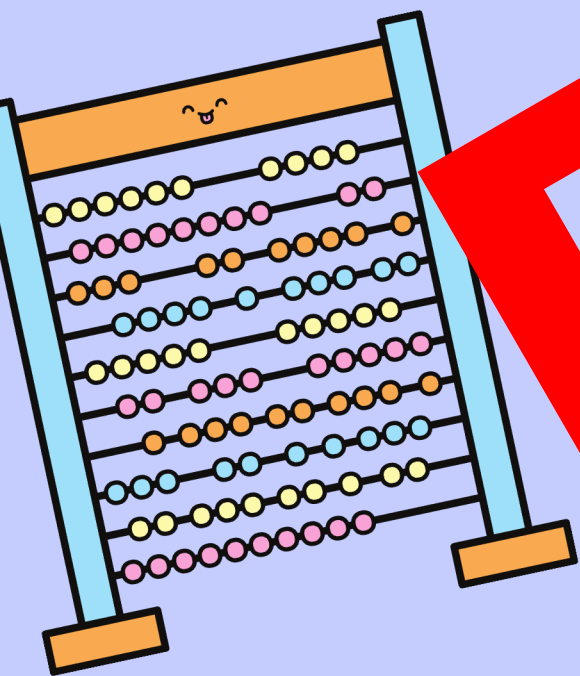
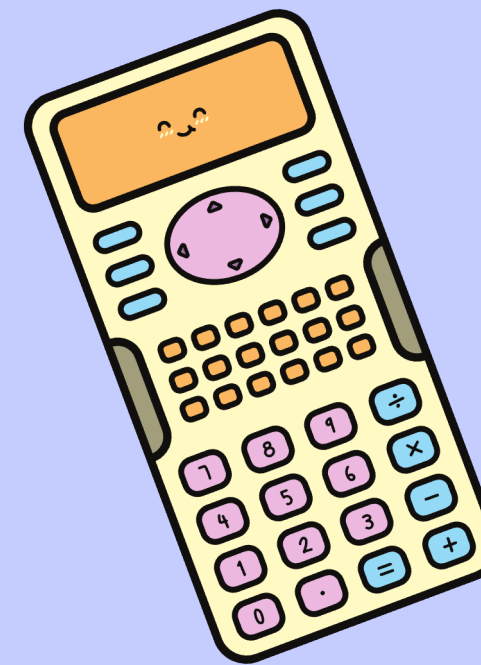
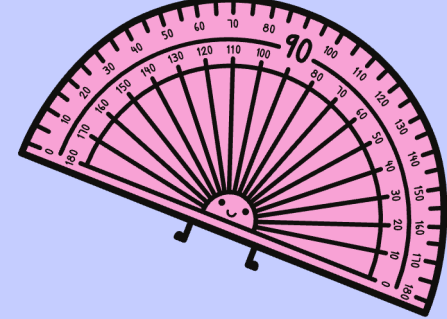
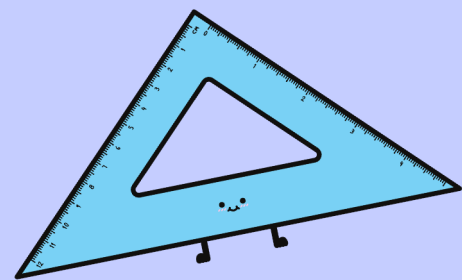
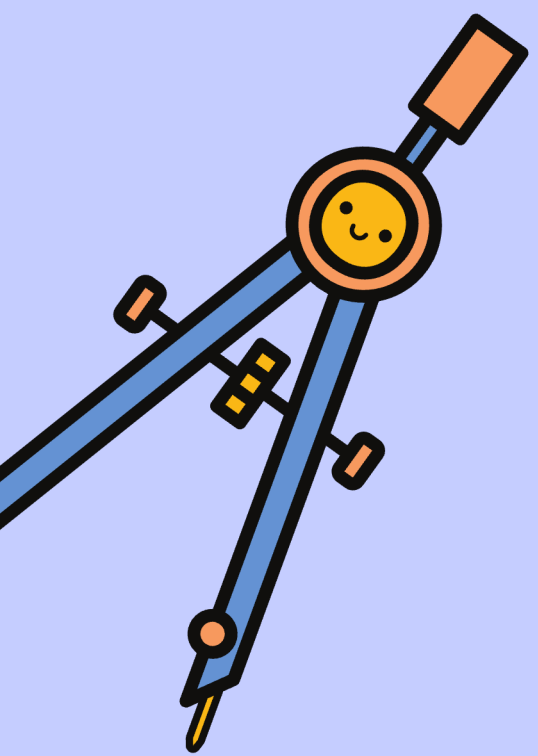


Answer 10

$$8 \times 3 = 24$$

There are 24 pieces of chocolate altogether.





Well Done!

PREVIEW