

Maya's Spring Garden Multiplication Adventure

Grade 4

math

spring

Students will interpret multiplication as equal groups and solve problems using multiplication, representing the relationship between a number of groups, group size, and total.

Name: _____

Date: _____

1. Maya finds 3 patches of spring clover. Each patch holds 7 special golden seeds. How many special golden seeds does Maya find in all? Show your working.

2. Fill in the blank. Maya spots 4 rows of rare butterfly cocoons. Each row has 6 cocoons. Maya counts __ rare butterfly cocoons in all. Show your working.

3. True or False? Maya collects 5 unique spring journals. Each journal has 8 pressed flowers inside. Maya has 45 pressed flowers in all. Show your working to prove your answer.

4. Maya follows a trail of rare robin eggs. She finds 6 nests. Each nest holds 9 rare robin eggs. How many rare robin eggs does Maya find? Show your working.

5. Complete the pattern. Maya plants unique flower bulbs in rows. 1 row = 8 bulbs. 2 rows = 16 bulbs. 3 rows = 24 bulbs. 4 rows = __. 5 rows = __. 7 rows = __. Write the rule Maya uses.

6. Maya discovers 9 hidden treasure boxes buried under spring blossoms. Each box holds 47 gold coins. How many gold coins does Maya discover in all? Show every step of your working.

7. Maya packs rare find crystals into bags. She fills 8 bags. Each bag holds 63 rare find crystals. She gives 4 bags to her friend. How many rare find crystals does Maya keep? Show every step.

8. Maya reaches the hidden treasure at the end of her spring trail. Inside the hidden treasure chest she finds 6 layers of unique spring gems. Each layer holds 85 unique spring gems. Maya wants to share all the gems equally among herself and 4 friends — that is 5 people total. First find the total gems. Then write a multiplication equation a friend could use to CHECK that Maya shared fairly. Show all your working.

Answer Key: Maya's Spring Garden Multiplication Adventure

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Before Q6, pause and ask students: 'If Maya found 9 rare butterfly cocoons in each of 8 hiding spots, could she use repeated addition instead of multiplication to check her answer?' This connects the equal-groups meaning of multiplication directly to the numbers on this worksheet and reinforces CCSS.MATH.4.OA.A.1.

1. Maya finds 3 patches of spring clover. Each patch holds 7 special golden seeds. How many special golden seeds does Maya find in all? Show your working.

Answer: Q1: 3 patches \times 7 special golden seeds = 21 special golden seeds. Maya finds 21 special golden seeds in all.

2. Fill in the blank. Maya spots 4 rows of rare butterfly cocoons. Each row has 6 cocoons. Maya counts __ rare butterfly cocoons in all. Show your working.

Answer: Q2: 4 rows \times 6 rare butterfly cocoons = 24 rare butterfly cocoons. Maya counts 24 rare butterfly cocoons in all.

3. True or False? Maya collects 5 unique spring journals. Each journal has 8 pressed flowers inside. Maya has 45 pressed flowers in all. Show your working to prove your answer.

Answer: Q3: 5 unique spring journals \times 8 pressed flowers = 40 pressed flowers. Maya has 40 pressed flowers, NOT 45. The statement is FALSE.

4. Maya follows a trail of rare robin eggs. She finds 6 nests. Each nest holds 9 rare robin eggs. How many rare robin eggs does Maya find? Show your working.

Answer: Q4: 6 nests \times 9 rare robin eggs = 54 rare robin eggs. Maya finds 54 rare robin eggs along the trail.

5. Complete the pattern. Maya plants unique flower bulbs in rows. 1 row = 8 bulbs. 2 rows = 16 bulbs. 3 rows = 24 bulbs. 4 rows = __. 5 rows = __. 7 rows = __. Write the rule Maya uses.

Answer: Q5: Rule — number of rows \times 8 unique flower bulbs. 4 rows \times 8 = 32 bulbs. 5 rows \times 8 = 40 bulbs. 7 rows \times 8 = 56 bulbs. The rule is: multiply the number of rows by 8.

6. Maya discovers 9 hidden treasure boxes buried under spring blossoms. Each box holds 47 gold coins. How many gold coins does Maya discover in all? Show every step of your working.

Answer: Q6: 9 hidden treasure boxes \times 47 gold coins each. Step 1 — $9 \times 40 = 360$. Step 2 — $9 \times 7 = 63$. Step 3 — $360 + 63 = 423$. Maya discovers 423 gold coins in all.

7. Maya packs rare find crystals into bags. She fills 8 bags. Each bag holds 63 rare find crystals. She gives 4 bags to her friend. How many rare find crystals does Maya keep? Show every step.

Answer: Q7: Step 1 — Total crystals: 8 bags \times 63 rare find crystals = 504 crystals. ($8 \times 60 = 480$, $8 \times 3 = 24$, $480 + 24 = 504$.) Step 2 — Bags Maya keeps: $8 - 4 = 4$ bags. Step 3 — Crystals Maya keeps: 4 bags \times 63 = 252 crystals. ($4 \times 60 = 240$, $4 \times 3 = 12$, $240 + 12 = 252$.) Maya keeps 252 rare find crystals.

8. Maya reaches the hidden treasure at the end of her spring trail. Inside the hidden treasure chest she finds 6 layers of unique spring gems. Each layer holds 85 unique spring gems. Maya wants to share all the gems

equally among herself and 4 friends — that is 5 people total. First find the total gems. Then write a multiplication equation a friend could use to CHECK that Maya shared fairly. Show all your working.

Answer: Q8: Step 1 — Total unique spring gems: 6 layers \times 85 gems each. $6 \times 80 = 480$. $6 \times 5 = 30$. $480 + 30 = 510$ unique spring gems in all. Step 2 — Each person's share: $510 \div 5 = 102$ gems per person. Step 3 — Multiplication check equation: 5 people \times 102 gems = 510 unique spring gems. This proves Maya shared fairly! Maya's spring adventure is complete — she found 510 unique spring gems and shared them equally with her friends.