

Luna's Space Adventure

Name _____

Grade 3 · Division as a missing factor · 3.OA.B.6

Date _____



Astronaut Luna is exploring a far-off corner of space. Solve each problem to help Luna's mission go smoothly!

Think multiplication The multiplication fact tells you the answer.

$$35 \div 5 = \square \text{ because } 5 \times \square = 35$$

$$8 \div 2 = \square \text{ because } 2 \times \square = 8$$

$$45 \div 9 = \square \text{ because } 9 \times \square = 45$$

$$6 \div 3 = \square \text{ because } 3 \times \square = 6$$

Riddle time Solve each one, then use the code to answer the riddle.

What holds the moon up in the sky?

$$1 \quad 22 \div 2 = \square$$

$$2 \quad 36 \div 3 = \square$$

$$3 \quad 48 \div 4 = \square$$

$$4 \quad 25 \div 5 = \square$$

$$5 \quad 30 \div 5 = \square$$

$$6 \quad 72 \div 8 = \square$$

$$7 \quad 6 \div 3 = \square$$

$$8 \quad 55 \div 5 = \square$$

$$9 \quad 6 \div 2 = \square$$

2 = A 3 = S 4 = Y 5 = N 6 = B 7 = X
8 = J 9 = E 10 = H 11 = M 12 = O

1

2

3

4

5

6

7

8

9

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ANSWER KEY



Astronaut Luna is exploring a far-off corner of space. Solve each problem to help Luna's mission go smoothly!

Think multiplication The multiplication fact tells you the answer.

$$35 \div 5 = \boxed{7} \text{ because } 5 \times \boxed{7} = 35$$

$$8 \div 2 = \boxed{4} \text{ because } 2 \times \boxed{4} = 8$$

$$45 \div 9 = \boxed{5} \text{ because } 9 \times \boxed{5} = 45$$

$$6 \div 3 = \boxed{2} \text{ because } 3 \times \boxed{2} = 6$$

Riddle time Solve each one, then use the code to answer the riddle.

What holds the moon up in the sky?

$$1 \quad 22 \div 2 = \boxed{11}$$

$$2 \quad 36 \div 3 = \boxed{12}$$

$$3 \quad 48 \div 4 = \boxed{12}$$

$$4 \quad 25 \div 5 = \boxed{5}$$

$$5 \quad 30 \div 5 = \boxed{6}$$

$$6 \quad 72 \div 8 = \boxed{9}$$

$$7 \quad 6 \div 3 = \boxed{2}$$

$$8 \quad 55 \div 5 = \boxed{11}$$

$$9 \quad 6 \div 2 = \boxed{3}$$

2 = A 3 = S 4 = Y 5 = N 6 = B 7 = X
8 = J 9 = E 10 = H 11 = M 12 = O

 M O O N B E A M S
1 2 3 4 5 6 7 8 9

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GUIDE

① What this sheet practises

Solving division by thinking of multiplication: $12 \div 4$ asks what times 4 makes 12.

② A problem from the sheet, worked out

Think multiplication The multiplication fact tells you the answer.

$$35 \div 5 = \boxed{7} \text{ because } 5 \times \boxed{7} = 35$$

$$8 \div 2 = \boxed{4} \text{ because } 2 \times \boxed{4} = 8$$

$$45 \div 9 = \boxed{5} \text{ because } 9 \times \boxed{5} = 45$$

How: Turn the division into a missing factor: $12 \div 4 = ?$ becomes $4 \times ? = 12$. The multiplication fact gives the answer.

③ Words to know

quotient the answer to a division

fact family facts that use the same three numbers

related fact a multiplication that checks a division

unknown the number you're finding

④ Watch for

- Using a multiplication fact with a different total.
- Swapping the numbers so the division no longer matches the fact.
- Guessing instead of checking with multiplication.

⑤ Where it fits

BEFORE

2.OA.B.2

Add and subtract within 20 from memory.

THIS SHEET

3.OA.B.6

Think of division as finding a missing factor.

NEXT

4.NBT.B.6

Divide up to four-digit numbers by one-digit numbers, with remainders.

⑥ Helping at home

Say a fact like $4 \times 3 = 12$ and ask for the two divisions it answers: $12 \div 4$ and $12 \div 3$.