

Superhero Factor Academy: Save the City with Factors!

Math

Grade 4

Superheroes Theme

Help your favorite Superheroes solve these factor adventures and save the day!

NAME _____

DATE _____

SCORE _____ / 8

1

Superman is organizing a training camp for young heroes. He has 12 super-powered trainees and wants to divide them into equal groups for different power-training stations. List all the factors of 12 so Superman knows all the different group sizes he can make.

2

Wonder Woman is designing a new defense grid around Themyscira with 18 magical force field generators. She needs to arrange them in rectangular patterns for maximum protection. How many different rectangular arrangements can she make? (Find all factor pairs of 18.)

3

Batman is distributing 24 high-tech gadgets equally among his Gotham City bases. What are all the possible numbers of bases he could have if each base gets the same number of gadgets with none left over?

4

Spider-Man is creating web-patrol routes through New York City. He has 15 city blocks to monitor and wants to group them so each patrol team covers the same number of blocks. What are all the different numbers of patrol teams he could create?

5

Black Widow is packing 20 secret mission briefcases into locked storage compartments. Each compartment must hold the same number of briefcases with no remainder. What are all the possible numbers of compartments she could use?

6

The Avengers are forming special rescue squads. They have 16 elite heroes to distribute equally across multiple teams, with every team having the same size and no heroes left out. List all the possible team sizes.

7

Captain America is organizing shields in the Avengers Tower armory. He wants to arrange 28 vibranium shields in equal rows for display. How many different rectangular display arrangements are possible? (Find all factor pairs.)

8

Iron Man's AI system JARVIS is dividing 30 repair drones equally among the laboratory sections in Stark Tower. What are all the different numbers of laboratory sections that could each receive an equal number of drones?

Answer Key

Math

Grade 4

For Parents and Teachers

1

Superman is organizing a training camp for young heroes. He has 12 super-powered trainees and wants to divide them into equal groups for different power-training stations. List all the factors of 12 so Superman knows all the different group sizes he can make.

ANSWER

1, 2, 3, 4, 6, 12

2

Wonder Woman is designing a new defense grid around Themyscira with 18 magical force field generators. She needs to arrange them in rectangular patterns for maximum protection. How many different rectangular arrangements can she make? (Find all factor pairs of 18.)

ANSWER

1×18, 2×9, 3×6 (or six different arrangements total)

3

Batman is distributing 24 high-tech gadgets equally among his Gotham City bases. What are all the possible numbers of bases he could have if each base gets the same number of gadgets with none left over?

ANSWER

1, 2, 3, 4, 6, 8, 12, 24

4

Spider-Man is creating web-patrol routes through New York City. He has 15 city blocks to monitor and wants to group them so each patrol team covers the same number of blocks. What are all the different numbers of patrol teams he could create?

ANSWER

1, 3, 5, 15

5

Black Widow is packing 20 secret mission briefcases into locked storage compartments. Each compartment must hold the same number of briefcases with no remainder. What are all the possible numbers of compartments she could use?

ANSWER

1, 2, 4, 5, 10, 20

6

The Avengers are forming special rescue squads. They have 16 elite heroes to distribute equally across multiple teams, with every team having the same size and no heroes left out. List all the possible team sizes.

ANSWER

1, 2, 4, 8, 16

7

Captain America is organizing shields in the Avengers Tower armory. He wants to arrange 28 vibranium shields in equal rows for display. How many different rectangular display arrangements are possible? (Find all factor pairs.)

ANSWER

1×28, 2×14, 4×7 (or six different arrangements)

8

Iron Man's AI system JARVIS is dividing 30 repair drones equally among the laboratory sections in Stark Tower. What are all the different numbers of laboratory sections that could each receive an equal number of drones?

ANSWER

1, 2, 3, 5, 6, 10, 15, 30