



Mission to Deep Space: Multi-Step Math

Help the crew of Starship Orion solve these critical mission calculations!

Name: _____ Date: _____

1 ASTRONAUT NUTRITION

An astronaut has a daily goal of consuming 3000 calories. So far today, they have eaten 3 space meals of 650 calories each and 2 energy snacks of 300 calories each. How many more calories must they consume to reach their daily goal?

Work:

Answer: _____

2 ROCKET PAYLOAD

A heavy-lift cargo rocket has a payload capacity of 9000 kilograms. Crews load 4 communication satellites weighing 950 kilograms each and 6 supply crates weighing 450 kilograms each. If the remaining weight capacity is split equally among 5 science rovers, what is the weight limit for each rover?

Work:

Answer: _____

3 MARS EXPLORATION

A Mars rover needs to travel 1200 meters to reach a crater. For the first 3 days, it travels 140 meters per day, and for the next 4 days, it travels 125 meters per day. If it must cover the remaining distance over the final 2 days, how many meters must it travel each day?

Work:

Answer: _____

4 SPACE PHOTOGRAPHY

A space telescope captures 820 high-resolution images of distant galaxies. Scientists discard 140 blurry images. They archive the remaining clear images equally into 4 computer servers, and then divide each server's images equally among 5 research teams. How many images does each team receive?

Work:

Answer: _____

5 MOON BASE RESOURCES

A lunar habitat starts with a 5000-liter water tank. The crew of 8 astronauts each uses 12 liters of water per day for 15 days. Additionally, a system flush uses up another 240 liters of water. How many liters of water remain in the tank after this period?

Work:

Answer: _____

An astro-botanist is growing space tomatoes in the ship's greenhouse. She has 12 shelves, with each shelf holding 8 tomato plants. If each plant produces exactly 15 tomatoes, and she packs the harvested tomatoes into boxes of 20, how many boxes can she fill completely?

Work:

Answer: _____

Answer Key

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1. An astronaut has a daily goal of consuming 3000 calories. So far today, they have eaten 3 space meals of 650 calories each and 2 energy snacks of 300 calories each. How many more calories must they consume to reach their daily goal? **450**
2. A heavy-lift cargo rocket has a payload capacity of 9000 kilograms. Crews load 4 communication satellites weighing 950 kilograms each and 6 supply crates weighing 450 kilograms each. If the remaining weight capacity is split equally among 5 science rovers, what is the weight limit for each rover? **500**
3. A Mars rover needs to travel 1200 meters to reach a crater. For the first 3 days, it travels 140 meters per day, and for the next 4 days, it travels 125 meters per day. If it must cover the remaining distance over the final 2 days, how many meters must it travel each day? **140**
4. A space telescope captures 820 high-resolution images of distant galaxies. Scientists discard 140 blurry images. They archive the remaining clear images equally into 4 computer servers, and then divide each server's images equally among 5 research teams. How many images does each team receive? **34**
5. A lunar habitat starts with a 5000-liter water tank. The crew of 8 astronauts each uses 12 liters of water per day for 15 days. Additionally, a system flush uses up another 240 liters of water. How many liters of water remain in the tank after this period? **3320**
6. An astro-botanist is growing space tomatoes in the ship's greenhouse. She has 12 shelves, with each shelf holding 8 tomato plants. If each plant produces exactly 15 tomatoes, and she packs the harvested tomatoes into boxes of 20, how many boxes can she fill completely? **72**