

Math 5b, homework 1.



1. Zoe multiplied four consecutive prime numbers and got a number ending in 0. What prime numbers did she multiply and what was her result?
2. Can the sum of four consecutive natural numbers leave a remainder of 2 when divided by 4?
3. Will the sum of four consecutive natural numbers always leave a remainder of 2 when divided by 4?
4. Evaluate:

$$\left(1.5 : \frac{1}{3} - \frac{3}{8} : 0.25\right) \cdot 3.2 - 3.2 \cdot \frac{5}{8};$$

5. Passenger in a train noticed that the oncoming cargo train passed in 9 seconds. What is the length of the cargo train, if its speed is 56 km per hour (kmph, km/h) and the speed of the passenger train is 84 km/h?
6. It takes two minutes to fry a hamburger on one side. Two hamburgers can be placed in a frying pan. What is the shortest time it takes to fry three hamburgers on both sides?
7. In 7 days, an elephant with a baby elephant eats 35 buckets of food. And in 10 days, an elephant with two baby elephants eats 60 buckets of the same food. How many buckets of food does an elephant eat per day?
8. Solve the following riddles (each letter represents a digit)

$$\begin{array}{r} \text{S O} \\ + \text{S O} \\ \hline \text{T O O} \end{array}$$

$$\begin{array}{r} \text{U S} \\ + \text{A S} \\ \hline \text{A L L} \end{array}$$

$$\begin{array}{r} \text{C O C A} \\ + \text{C O L A} \\ \hline \text{O A S I S} \end{array}$$

