

Bronze

1a. $1,221 \text{ r}2$

2a. False. The answer is 1,211.

3a. $A = 1,313$

1b. Steph is incorrect because

$2,243 \div 2 = 1,121 \text{ r}1$.

2b. $4,847 \div 4 = 1,211 \text{ r}3$; 1,212 packets will be needed.

3b. $6,697 \div 3 = 2,232 \text{ r}1$

Silver

4a. $1,077 \text{ r}1$

5a. False. The answer is 1,104.

6a. $A = 1,053$

4b. Alice is correct. Hannah has miscalculated how many times 39 can be grouped into 8 so her remainder is bigger than her divisor.

5b. $9,621 \div 8 = 1,202 \text{ r}5$, 1,203 boxes will be needed.

6b. $3,544 \div 7 = 506 \text{ r}2$

Gold

7a. A. 910 r6; B. 754 r4; C. 1,820 r3

8a. $9,964 \div 9 = 1,107 \text{ r}1$

9a. $8,476 \div 5 = 1,695 \text{ r}1$

7b. Isabel is correct. Sinead's divisor would give an answer of 541 r4.

8b. 7 pears per bag and 287 bags.

9b. Various answers, for example:

$3,153 \div 9 = 350 \text{ r}3$, $3,135 \div 9 = 348 \text{ r}3$

Challenge

1. Aron is helping his dad prepare party bags for his Bar Mitzvah.

His dad has bought 1,436 sweets to share into party bags to give to the guests to take part in the tradition of sweet throwing at the event.

His dad has bought enough sweets so that there are:



A minimum
of 3 sweets
per bag

A
maximum
of 8 sweets
per bag

Some
sweets left
over

Explore the different possible combinations of number of sweets in a party bag, the number of bags made and the remaining sweets that will be left over for the family.

Various answers, for example: 6 sweets per bag, 239 bags and 2 sweets left over.

2. Mika and Alissa work at the zoo and are responsible for making sure there is enough space for each animal.

There cannot be more than 9 animals in an enclosure.

There are 3,345 animals in the zoo.

Except one, all the enclosures have an equal number of animals in.



Investigate the different possible number of enclosures that are needed to look after the animals properly.

Various answers, for example: 372 enclosures. 371 with 9 animals in and 1 with 6 animals in.