

Name: _____

GCF & LCM Word Problems

BIANCA'S BAKERY

- 1.) Bianca orders sugar every 12 days, flour every 18 days, and sprinkles every 27 days. If she received shipments of all three items today, in how many days will she receive all 3 on the same day again?



- 2.) Bianca is running a promotion where every 5th customer receives a free cookie and every 13th customer receives a free cupcake. Which customer will be the first to win both a cookie **and** a cupcake?



- 3.) Bianca needs to ship 12 muffins, 24 brownies, and 30 cinnamon rolls out of state. She can pack only one type of baked good in each box, and she must pack the same number of baked goods in each box. What is the greatest number baked goods Bianca can pack in each box?



4.) For a wedding, Bianca needs to arrange 64 rainbow cookies, 56 cinnamon cookies, and 40 peanut butter cookies into gift bags. She can include only one type of cookie per gift bag, and she must use the same number of cookies in each gift bag.

a.) What is the greatest number of cookies that she can put into each gift bag?

b.) How many gift bags can she make in total?



5.) Bianca sells special Unicorn Glitter Cookies every 3 days and special Mermaid Glitter Cupcakes every 8 days. If she was selling both Unicorn Glitter Cookies and Mermaid Glitter Cupcakes on June 1st, what is the next date that both items will be available again on the same day?



ANSWER KEY

1.)

Multiples of 12: 12, 24, 36, 48, 60, 72, 84, 96, 108, 120

Multiples of 18: 18, 36, 72, 90, 108, 126

Multiples of 27: 27, 54, 81, 108

She will receive a shipment of all three items on the same day again in 108 days.

2.)

Multiples of 5: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80

Multiples of 13: 13, 26, 39, 52, 65, 78, 91, 104, 117

The 65th customer will receive both a free cookie and a free cupcake.

3.)

Factors of 12: 1, 2, 3, 4, 6, 12

Factors of 24: 1, 2, 3, 4, 6, 8, 12, 24

Factors of 30: 1, 2, 3, 5, 6, 10, 15, 30

She can put 6 baked goods in each box.

4.)

Factors of 64: 1, 2, 4, 8, 16, 32, 64

Factors of 56: 1, 2, 4, 7, 8, 14, 28, 56

Factors of 40: 1, 2, 4, 5, 8, 10, 20, 40

a.) She can put 8 cookies in each gift bag.

$$64 + 56 + 40 = 160$$

$$160 \div 8 = 20$$

b.) She can make 20 gift bags.

5.)

Multiples of 3: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30

Multiples of 8: 8, 16, 24, 32, 40, 48

Both items will be available again on June 25th, 24 days after June 1st.