

Pick A Lucky Number and Win the Prize

Select any **2 digit number**. **Add the 2 digits** of your number (the ones and tens digits). **Subtract that total from the original number** you selected. Find your number on the Gift Chart below.

1 Bike Helmet	12 Sailboat Trip	23 Kids Wagon	34 Toy Trains	45 Bag of Dirt	56 Dress Shirt	67 Trip to Hawaii	78 Antique Doll	89 Ceramic Bowl
2 Dress Socks	13 Ceramic Bowl	24 Oil Painting	35 Cookie Jar	46 Scented Candle	57 New Car	68 New House	79 Antique Doll	90 New House
3 Scented Candle	14 New House	25 Candy Dish	36 Bag of Dirt	47 Trip to Hawaii	58 Toy Trains	69 Day Spa	80 Running Shoes	91 Million Dollars
4 Antique Doll	15 Dozen Roses	26 Key Chain	37 Bread Maker	48 DVD Player	59 Sailboat Trip	70 Cookie Jar	81 Bag of Dirt	92 Dress Shirt
5 Candy Dish	16 Scuba Gear	27 Bag of Dirt	38 Bike Helmet	49 Toy Trains	60 Cookie Jar	71 Antique Doll	82 Million Dollars	93 New Car
6 Dress Shirt	17 Scented Candle	28 Trip to Hawaii	39 New Car	50 Cell Phone	61 Day Spa	72 Bag of Dirt	83 Candy Dish	94 Day Spa
7 New Car	18 Bag of Dirt	29 Toy Trains	40 New House	51 Running Shoes	62 Sailboat Trip	73 Toy Trains	84 New House	95 Scented Candle
8 Toy Trains	19 Glass Vase	30 Running Shoes	41 DVD Player	52 Antique Doll	63 Bag of Dirt	74 New Car	85 Sailboat	96 Bike Helmet
9 Bag of Dirt	20 Wind Chimes	31 Dress Shirt	42 Candy Dish	53 Ceramic Bowl	64 Mouse Pad	75 Bike Helmet	86 Trip to Hawaii	97 Candy Dish
10 Million Dollars	21 Gift Card	32 New House	43 Mouse Pad	54 Bag of Dirt	65 Coffee Maker	76 Running Shoes	87 Antique Doll	98 Cookie Jar
11 Day Spa	22 DVD Player	33 Mouse Pad	44 Sailboat Trip	55 Million Dollars	66 Ceramic Bowl	77 Toy Trains	88 Dress Shirt	99 Million Dollars

Procedure:

Ask several student to get out a piece of paper and a pen or pencil. Show them the grid and note the numbers and prizes under the numbers. Read some of the **great prizes** a lucky student may win. Tell them that they will be asked to do a few math problems and get a final answer. That answer will be a number from 1 to 99. The prize they win will be the one listed under the number they get. Also state that their math must be correct to win so they need to write the work down so it can be checked. To help ensure that they work is correct you will be put with a couple of other students so they can each check on each others work.

Hand each of the different grids out to several different students. They will all get different gifts but they will all be bad.

Select any 2 digit number and write it down. Add the 2 digits of your number (the ones and tens digits) to get a second number and write that number down. Subtract the total of the digits from the original number they selected. Show the work and circle the final answer. That is the lucky number. Have them find their number on the Gift Chart they are holding. (Do not ask for the number, just the gift). Ask each group what the gift they won was.

How Does it work:

If you pick any 2 digit number there is a tens digit x and a ones digit y . The number is written $\underline{x} y$ but in base 10 notation the number is expressed as $10x + y$

When you add up the ones and 10s digit you get $x + y$. IF you subtract that from the original number you get

$$\begin{aligned} & 10x + y - (x + y) \\ &= 10x + y - x - y \\ &= 9x. \end{aligned}$$

where x is the 10s digit in the number $\underline{x} y$ AND x is any number from 1 to 9

The number you end up with is 9 times the tens digit.

Your number is $9x$ where x is a number from 1 to 9.

your number is either 9, 18, 27, 36, 45, 54, 63, 72 or 81,

The gift chart could have ended at 81.

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1 Bike Helmet	12 Sailboat Trip	23 Kids Wagon	34 Toy Trains	45 Nose Hair	56 Dress Shirt	67 Trip to Hawaii	78 Antique Doll	89 Ceramic Bowl
2 Dress Socks	13 Ceramic Bowl	24 Oil Painting	35 Cookie Jar	46 Scented Candle	57 New Car	68 New House	79 Antique Doll	90 New House
3 Scented Candle	14 New House	25 Candy Dish	36 Nose Hair	47 Trip to Hawaii	58 Toy Trains	69 Day Spa	80 Running Shoes	91 Million Dollars
4 Antique Doll	15 Dozen Roses	26 Key Chain	37 Bread Maker	48 DVD Player	59 Sailboat Trip	70 Cookie Jar	81 Nose Hair	92 Dress Shirt
5 Candy Dish	16 Scuba Gear	27 Nose Hair	38 Bike Helmet	49 Toy Trains	60 Cookie Jar	71 Antique Doll	82 Million Dollars	93 New Car
6 Dress Shirt	17 Scented Candle	28 Trip to Hawaii	39 New Car	50 Cell Phone	61 Day Spa	72 Nose Hair	83 Candy Dish	94 Day Spa
7 New Car	18 Nose Hair	29 Toy Trains	40 New House	51 Running Shoes	62 Sailboat Trip	73 Toy Trains	84 New House	95 Scented Candle
8 Toy Trains	19 Flower Vase	30 Running Shoes	41 DVD Player	52 Antique Doll	63 Nose Hair	74 New Car	85 Sailboat	96 Bike Helmet
9 Nose Hair	20 Wind Chimes	31 Dress Shirt	42 Candy Dish	53 Ceramic Bowl	64 Mouse Pad	75 Bike Helmet	86 Trip to Hawaii	97 Candy Dish
10 Million Dollars	21 Gift Card	32 New House	43 Mouse Pad	54 Nose Hair	65 Coffee Maker	76 Running Shoes	87 Antique Doll	98 Cookie Jar
11 Day Spa	22 DVD Player	33 Mouse Pad	44 Sailboat Trip	55 Million Dollars	66 Ceramic Bowl	77 Toy Trains	88 Dress Shirt	99 Million Dollars

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1 Bike Helmet	12 Sailboat Trip	23 Kids Wagon	34 Toy Trains	45 Ear Wax	56 Dress Shirt	67 Trip to Hawaii	78 Antique Doll	89 Ceramic Bowl
2 Dress Socks	13 Ceramic Bowl	24 Oil Painting	35 Cookie Jar	46 Scented Candle	57 New Car	68 New House	79 Antique Doll	90 New House
3 Scented Candle	14 New House	25 Candy Dish	36 Ear Wax	47 Trip to Hawaii	58 Toy Trains	69 Day Spa	80 Running Shoes	91 Million Dollars
4 Antique Doll	15 Dozen Roses	26 Key Chain	37 Bread Maker	48 DVD Player	59 Sailboat Trip	70 Cookie Jar	81 Ear Wax	92 Dress Shirt
5 Candy Dish	16 Scuba Gear	27 Ear Wax	38 Bike Helmet	49 Toy Trains	60 Cookie Jar	71 Antique Doll	82 Million Dollars	93 New Car
6 Dress Shirt	17 Scented Candle	28 Trip to Hawaii	39 New Car	50 Cell Phone	61 Day Spa	72 Ear Wax	83 Candy Dish	94 Day Spa
7 New Car	18 Ear Wax	29 Toy Trains	40 New House	51 Running Shoes	62 Sailboat Trip	73 Toy Trains	84 New House	95 Scented Candle
8 Toy Trains	19 Flower Vase	30 Running Shoes	41 DVD Player	52 Antique Doll	63 Ear Wax	74 New Car	85 Sailboat	96 Bike Helmet
9 Ear Wax	20 Wind Chimes	31 Dress Shirt	42 Candy Dish	53 Ceramic Bowl	64 Mouse Pad	75 Bike Helmet	86 Trip to Hawaii	97 Candy Dish
10 Million Dollars	21 Gift Card	32 New House	43 Mouse Pad	54 Ear Wax	65 Coffee Maker	76 Running Shoes	87 Antique Doll	98 Cookie Jar
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1 Bike Helmet	12 Sailboat Trip	23 Wagon	34 Toy Trains	45 Dead Fish	56 Dress Shirt	67 Trip to Hawaii	78 Antique Doll	89 Ceramic Bowl
2 Dress Socks	13 Ceramic Bowl	24 Oil Painting	35 Cookie Jar	46 Scented Candle	57 New Car	68 New House	79 Antique Doll	90 New House
3 Scented Candle	14 New House	25 Candy Dish	36 Dead Fish	47 Trip to Hawaii	58 Toy Trains	69 Day Spa	80 Running Shoes	91 Million Dollars
4 Antique Doll	15 Dozen Roses	26 Key Chain	37 Bread Maker	48 DVD Player	59 Sailboat Trip	70 Cookie Jar	81 Dead Fish	92 Dress Shirt
5 Candy Dish	16 Scuba Gear	27 Dead Fish	38 Bike Helmet	49 Toy Trains	60 Cookie Jar	71 Antique Doll	82 Million Dollars	93 New Car
6 Dress Shirt	17 Scented Candle	28 Trip to Hawaii	39 New Car	50 Cell Phone	61 Day Spa	72 Dead Fish	83 Candy Dish	94 Day Spa
7 New Car	18 Dead Fish	29 Toy Trains	40 New House	51 Running Shoes	62 Sailboat	73 Toy Trains	84 New House	95 Scented Candle
8 Toy Trains	19 Flower Vase	30 Running Shoes	41 DVD Player	52 Antique Doll	63 Dead Fish	74 New Car	85 Sailboat	96 Bike Helmet
9 Dead Fish	20 Wind Chimes	31 Dress Shirt	42 Candy Dish	53 Ceramic Bowl	64 Mouse Pad	75 Bike Helmet	86 Trip to Hawaii	97 Candy Dish
10 Million Dollars	21 Gift Card	32 New House	43 Mouse Pad	54 Dead Fish	65 Coffee Maker	76 Running Shoes	87 Antique Doll	98 Cookie Jar
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2 Dress Socks	13 Ceramic Bowl	24 Oil Painting	35 Cookie Jar	46 Scented Candle	57 New Car	68 New House	79 Antique Doll	90 New House
3 Scented Candle	14 New House	25 Candy Dish	36 Barf Bag	47 Trip to Hawaii	58 Toy Trains	69 Day Spa	80 Running Shoes	91 Million Dollars
4 Antique Doll	15 Flowers	26 Key Chain	37 Bread Maker	48 DVD Player	59 Sailboat Trip	70 Cookie Jar	81 Barf Bag	92 Dress Shirt
5 Candy Dish	16 Scuba Gear	27 Barf Bag	38 Bike Helmet	49 Toy Trains	60 Cookie Jar	71 Antique Doll	82 Million Dollars	93 New Car
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8 Toy Trains	19 Vase	30 Running Shoes	41 DVD Player	52 Antique Doll	63 Barf Bag	74 New Car	85 Sailboat	96 Bike Helmet
9 Barf Bag	20 Wind Chimes	31 Dress Shirt	42 Candy Dish	53 Ceramic Bowl	64 Mouse Pad	75 Bike Helmet	86 Trip to Hawaii	97 Candy Dish
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