

Math Challenge

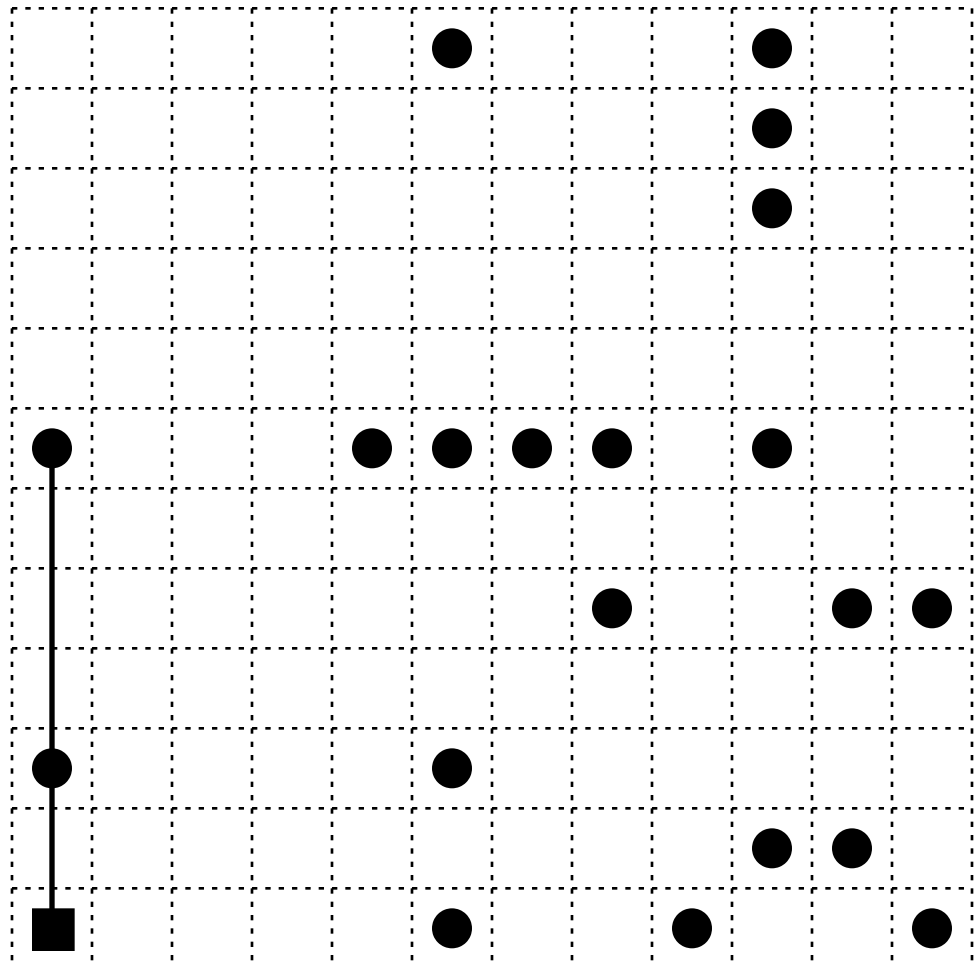


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Start on the square. Draw exactly 11 lines without picking up your pencil to connect all the circles.



Name: _____

Sunday's game sold three thousand, sixty-six more than two times the number of tickets sold for the game on Wednesday. The total number of tickets sold for Sunday and Wednesday was 39,816. How many tickets were sold on Wednesday?

Matthew and Makayla each played six games of bowling. Their total score was 1,520. Matthew scored fifty-two points less than Makayla. What was Matthew's average score per game?

Victoria played a few games of bowling. The third game she scored ninety more than the second game. The first game she scored one hundred fourteen less than the third game. Her total score for the first two games was 216. If she wants an average score of 143, what must she score on the fourth game?

On Monday, Ashley played seven games of bowling and averaged a score of 144. She played five more games on Wednesday to bring her average over all the games played on Monday and Wednesday to 164. What was her average score on Wednesday?

Name: _____

What is the least common multiple for each of the number sets?

The least common multiple of 7 and 10 is _____

The least common multiple of 8 and 16 is _____

The least common multiple of 3 and 12 is _____

The least common multiple of 12 and 18 is _____

The least common multiple of 10 and 16 is _____

In each group, use 4 of the numbers to make a proportion.

18 12 8 16 24 6

3 17 48 51 5 85

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edHelper**Name:** _____

Devin is eleven less than two times the age of Benjamin. Jessica is fifty less than four times the age of Benjamin. The sum of their ages is fifty-eight. How old is Benjamin?

Noah is one-third the age of Stephanie. Timothy is one-fourth the age of Stephanie. The sum of their ages is nineteen. How old is Noah?

Twenty-four years ago, Julia was eight less than one-half as old as Dylan was. Today, Dylan is forty-two less than three times the age of Julia. How old is Dylan?

Danielle is three less than one-sixth as old as Devin. Devin is twenty-eight years older than Danielle. How old is Danielle?

Name: _____

Fill in the missing numbers. How? The sum of the four surrounding numbers is in the center of each square.

Exactly one of the four numbers has to be one of these numbers: $2\frac{1}{3}$, $4\frac{1}{2}$, or $\frac{4}{5}$.

The other three numbers have to all be DIFFERENT and must be from these: $1\frac{2}{3}$, $3\frac{2}{3}$, $7\frac{2}{3}$, or $6\frac{2}{3}$.

	$3\frac{2}{3}$		$7\frac{2}{3}$		$7\frac{2}{3}$		$1\frac{2}{3}$	
$1\frac{2}{3}$	$12\frac{4}{5}$	$\frac{4}{5}$	$18\frac{4}{5}$	$6\frac{2}{3}$	$20\frac{1}{3}$	$2\frac{1}{3}$	$14\frac{1}{3}$	$3\frac{2}{3}$
	$6\frac{2}{3}$		$3\frac{2}{3}$		$3\frac{2}{3}$		$6\frac{2}{3}$	
$2\frac{1}{3}$	$18\frac{1}{3}$	$7\frac{2}{3}$	$13\frac{4}{5}$	$\frac{4}{5}$	$13\frac{4}{5}$	$1\frac{2}{3}$	$12\frac{4}{5}$	$\frac{4}{5}$
	$1\frac{2}{3}$		$1\frac{2}{3}$		$7\frac{2}{3}$		$3\frac{2}{3}$	
$7\frac{2}{3}$		$\frac{4}{5}$	$12\frac{4}{5}$	$6\frac{2}{3}$	$16\frac{4}{5}$	$1\frac{2}{3}$	$15\frac{1}{3}$	$7\frac{2}{3}$
	$3\frac{2}{3}$		$3\frac{2}{3}$		$\frac{4}{5}$		$2\frac{1}{3}$	
$1\frac{2}{3}$	$14\frac{1}{3}$	$2\frac{1}{3}$	$15\frac{1}{3}$	$1\frac{2}{3}$	$13\frac{4}{5}$	$3\frac{2}{3}$	$15\frac{1}{3}$	$1\frac{2}{3}$
	$6\frac{2}{3}$		$7\frac{2}{3}$		$7\frac{2}{3}$		$7\frac{2}{3}$	
$2\frac{1}{3}$	$14\frac{1}{3}$	$1\frac{2}{3}$	$20\frac{1}{2}$	$6\frac{2}{3}$		$3\frac{2}{3}$		$4\frac{1}{2}$
	$3\frac{2}{3}$		$4\frac{1}{2}$		$4\frac{1}{2}$		$1\frac{2}{3}$	

Name: _____

One hundred twenty-four more than nine times a number is greater than ten times the number. What numbers satisfy this inequality?

Michael has budgeted to spend two times more on food than on entertainment. He also wants to spend two times more on rent than on food. If he has \$322.52 to spend, what is the most he can spend on rent?

The telephone company offers two calling plans. The first plan charges twenty-four cents per minute. The second plan charges four cents per minute but requires a fixed monthly charge of \$19.20. Sarah needs to pick a plan. If Sarah knows how many minutes per month she will use, which plan is cheaper?

Sierra has \$20.54. She got into a cab that charges \$1.46 for the first one-eleventh of a mile and twelve cents for each additional one-eleventh of a mile. What is the longest distance that Sierra can travel?

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edHelper**Name:** _____

A number is two times as large as another number. Three times the smaller number is twenty-eight more than the smaller number. What are the numbers?

A number r is seven times the value of number c . A number a is six times the value of number c . The sum of r , a , and c is 140. What is the value of r ?

The sum of the reciprocals of two numbers is $\frac{1}{3}$. The second number is three times larger than the first number. What are the two numbers?

What number must be subtracted from both the numerator and denominator of $\frac{23}{25}$ to make a fraction equal to $\frac{9}{10}$?

Name: _____

Anna collected all the biggest rocks that she could find. She found 29 rocks with an average weight of 628 grams.

How much do all the rocks weigh in kilograms?

$\frac{2}{3}$ of the kids in Mr. King's class signed up

for soccer.

$\frac{3}{4}$ of the kids in Mrs. Jones' class signed up

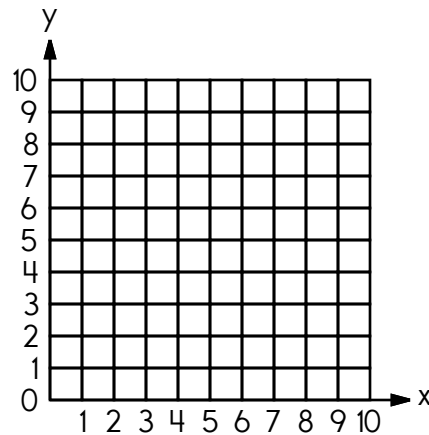
for soccer.

Which class has more kids who signed up for soccer?

Megan created a chart of whole numbers starting from 0 to 350. She drew a rectangle around each number. What is the 15th even number on her chart?

What is the 72th even number on her chart?

What is the 170th even number on her chart?



Shade in all the spots where the product of the coordinates is less than 4.

Name: _____

		+		+		=	
	C		B		A		15
+	C		C		B		20
x	C		C		?		18
=							
	42		44		49		

Equations and Hints:

Each letter is a whole number.

Fill in the equations using the chart:

$$C + C \times C = 42 \quad C + B + A = \underline{\quad} \quad \underline{\quad} + \underline{\quad} \times \underline{\quad} = 44$$

$$\underline{\quad} + \underline{\quad} + \underline{\quad} = 20$$

Additional hints:

$$C < 10 \quad C = A + 5$$

Show Work:

Solve:

$$? = \underline{\quad}$$

Name: _____

Connor made a chart to show the cost of a typical lunch at his school. According to the chart, each meal costs the school \$2.65 to make. The price charged for the meal is \$2.94. There are 216 students in the school. One-sixth of the students receive free lunches and the rest of the students pay full price. What is the difference between the cost of forty-nine lunches and the amount of money paid for the lunches?

In the Bigtown environmental studies lab, a technician is analyzing water from the local river. She is measuring the pesticide concentration in the water. She analyzes the sample 3 times and the pesticide concentration measurements are 0.09 mg/ml, 0.09 mg/ml and 0.09 mg/ml. What was the average of the three measurements? Round your answer to the nearest thousandth.

At the local convenience store, bubble gum outsells non-bubble gum by a four-to-one ratio. If the store sold 225 pieces of gum today, how many of them were pieces of non-bubble gum?

The Floop family went to a hockey game last weekend. They spent \$19 on food, \$40 on souvenirs, and \$17 on drinks. What fraction of their expenditures was spent on drinks?

Hunter bought some parts to repair his saxophone. He needed a new ligature (the part that clamps the reed to the mouthpiece). He found several different kinds in some catalogs. He decided to buy one of each since they were not that expensive and he wanted to see which one he liked the best. He got one for \$15.87, one for \$8.62, and one for \$7.99. The total shipping cost for all three was \$5 and the sales tax on everything he purchased, including shipping, was 7.6%. How much did he spend?

What is the probability of choosing a heart from a standard deck of 52 randomly arranged playing cards?

Name: _____

Based on what has been found so far, the ratio of fossil floopasaurs to fossil bloopia in Africa is 3 to 1. If this ratio is later discovered to have an error of 30% (too high) for floopasaurs, what would the corrected ratio be?

A racecar goes from 188 MPH to zero MPH in 12 seconds. What is the car's acceleration? Round your answer to the nearest tenth.

In a certain desert environment there are a lot of small rodents. There also happen to be a lot of snakes that feed on the rodents. The ratio of rodents to rodent eating snakes is 13 to 4. If there are 3,400 snakes in the area, how many rodents are there?

"They" are found on Mars, Venus, and Earth. As far as is known there are forty-four of "them." If twelve are on Mars, and fourteen are on Earth, what fraction of "them" are on Venus?

The Big Town football team scored $\frac{1}{4}$ of their points on passing plays, $\frac{1}{5}$ on kicks, $\frac{1}{6}$ on turnovers, and the rest on running plays. If they scored 146 points during the season, how many points did they score on running plays?

During a geological survey by Z-Globe Corporation, a particular parcel of land was found to consist of alternating layers of sand and clay. The thickness of the first clay layer was about 54.1 cm and the second one was about 67.8 cm. There was a layer of sand in between the two clay layers. If the total thickness of the three layers (clay-sand-clay) was about 161 cm, what percent of the total thickness was made up of sand? Round your answer to the nearest hundredth.

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edHelper**Name:** _____

Emma rode her bike to Wendy's house. Leaving her driveway, she turned right and rode about 1.9 kilometers where she turned left. Wendy's house was the sixth house on the left side of the road. It's getting late, and Emma needs to go home, but she has brain freeze. Write directions on how she should ride her bike home from Wendy's house.

Erin created a chart of whole numbers starting from 0 to 350. She drew a rectangle around each number. What is the 14th even number on her chart?

How many even numbers are on her chart?

Seven players in a basketball game scored points ranging from 5 to 15. The players averaged 9 points each. Make up what each of the seven players' scores could be.

It's 5:25 p.m., and Jack sets his watch to the correct time. His watch has trouble keeping track of time. It loses 3 seconds every hour. Most people would find another watch, but this has been his watch since forever, and he won't give up on it. The following day his watch alarm goes off at 6:43 a.m. to wake him up. The watch says 6:43 a.m., but what is the real time?

Page 1 Answers

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- 1 12,250 (27,566 on Sunday)
- 2 122.33 ($734/6$)
- 3 146 (96, 120, 210, 146)
- 4 192

Page 3 Answers

- 1 17
- 2 4
- 3 60
- 4 2

Page 5 Answers

- 1 Any number less than 124
- 2 \$184.28 (entertainment \$46.07, food \$92.14, rent \$184.28)
- 3 If she talks for less than 1 hour and 36 minutes per month, the first plan is better.
- 4 fourteen and six-elevenths miles

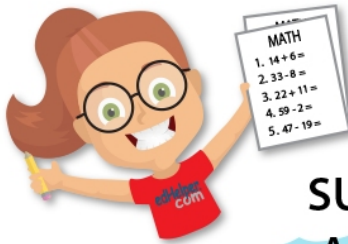
Page 6 Answers

- 1 14 and 28
- 2 70
- 3 4 and 12

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