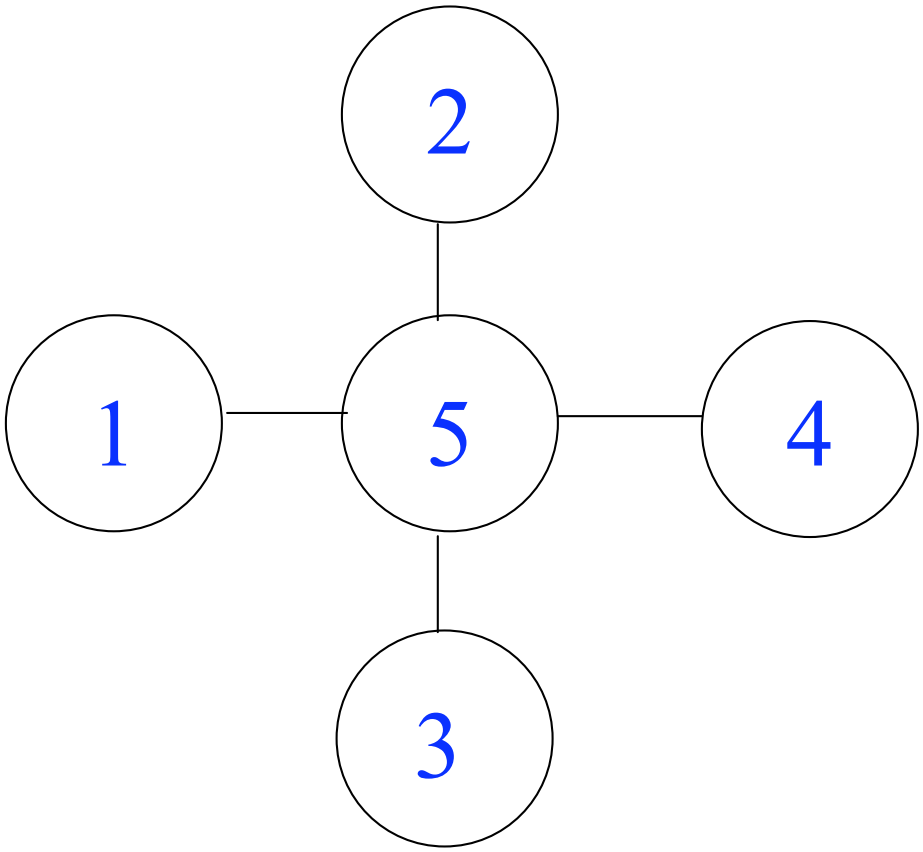
1WEDNESDAY MORNING MATH –
LEVEL 1, PROBLEM 1

Place the 5 digits, 1-5, in the circles below so that the sum of the 3 numbers in each line is the same, and totals 10. Use each digit just once.



WEDNESDAY MORNING MATH –
LEVEL 1, PROBLEM 2

A frog can jump 2 feet. How many jumps are needed for the frog to cover a distance of at least 13 feet?

Answer: 7 jumps

Prove your answer with a picture or diagram below.

# of jump	Starting point	Ending point
1st	0 feet	2 feet
2nd	2 feet	4 feet
3rd	4 feet	6 feet
4th	6 feet	8 feet
5th	8 feet	10 feet
6th	10 feet	12 feet
7th	12 feet	14 feet

WEDNESDAY MORNING MATH –
LEVEL 1, PROBLEM 3

a △ b means (a + b) – (a – b)

For example:

6 △ 4 = (6 + 4) – (6 – 4)

= 10 – 2
= 8

How much larger is 10 △ 8 than 8 △ 6 ? 4 larger

Show all of your work below.

(10 + 8) – (10 – 8)
= 18 – 2
= 16

(8 + 6) – (8 – 6)
= 14 – 2
= 12

16 – 12 = 4

WEDNESDAY MORNING MATH –
LEVEL 2, PROBLEM 1

In the addition problem below, find the number represented by ABC.

$$\begin{array}{r} 132 \\ 469 \\ +\,ABC \\ \hline 999 \end{array}$$

ANSWER: 398

WEDNESDAY MORNING MATH - LEVEL 2, PROBLEM 2

The last Friday of a particular month is on the 26th day of the month. What day of the week is the first day of that month?

Answer: Monday will be the 1st day of the month.

If the 26th is a Friday, then the 19th will be a Friday (26-7), then the 12 will be a Friday, and the 5th will be a Friday. If Friday is the 5th, Thursday will be the 4th, Wednesday will be the 3rd, Tuesday will be the 2nd, and Monday will be the 1st.

WEDNESDAY MORNING MATH – LEVEL 2, PROBLEM 3

Amanda, Jess, Conner, and Molly helped put prizes in boxes and bags for the Village Green Fair. Each bag has 10 prizes. Each box has 100 prizes.

- Amanda packed the toy cars. She packed 5 boxes, 3 bags, and had 4 cars left over.

- Jess packed the balls. She packed 1 more box than Amanda did, but Amanda packed 1 more bag than she did. Jess didn't have any balls left over.

- Conner packed the kites. Amanda packed 1 more box than Conner, but Conner packed 6 more bags than Amanda. Conner had 3 kites left over.

- Molly packed CDs. She packed 1 more box than Jess. Conner packed 1 more bag than Molly. Molly had 1 CD left over.

How many of each prize did they have for the fair?

Amanda: $5(100) + 3(10) + 4 = 534$ toy cars
Jess: $6(100) + 2(10) = 620$ balls
Conner: $4(100) + 9(10) + 3 = 493$ kites
Molly: $7(100) + 8(10) + 1 = 781$ CDs

WEDNESDAY MORNING MATH – LEVEL 3, PROBLEM 1

If a △ b = (b + b – a) – (a – b), how much larger is

9 △ 8 than 7 △ 5 ? Answer: 5 more

Show your work below.

(8 + 8 – 9) – (9 – 8)
= 7 – 1
= 6

(5 + 5 – 7) – (7 – 5)
= 3 – 2
= 1

6 – 1 = 5 more

WEDNESDAY MORNING MATH – LEVEL 3, PROBLEM 2

Robert, Gary, Catherine, and Eddie each bought snacks from several vending machines. Each person got back 6 coins, but they were different combinations of coins.

Each person received less than $1 in change. The machines returned only nickels, dimes, and quarters. Each person had at least one of each coin.

- Robert had the fewest dimes but the same number of quarters as Eddie.
- Gary had an equal number of nickels, dimes, and quarters.
- Catherine had the same number of quarters as Gary.
- Eddie had more dimes than Catherine.
- Catherine had more dimes than quarters.
- Robert had fewer quarters than Catherine.

Question: How much money did each person get back from the machines?

Gary: 2 nickels, 2 dimes, 2 quarters, 80 cents
Catherine: 1 nickel, 3 dimes, 2 quarters, 85 cents
Eddie: 1 nickel, 4 dimes, 1 quarter, 70 cents
Robert: 4 nickels, 1 dime, 1 quarter, 55 cents

Bonus question: How much money did they get back in all?

80 + 85 + 70 + 55 = $2.90

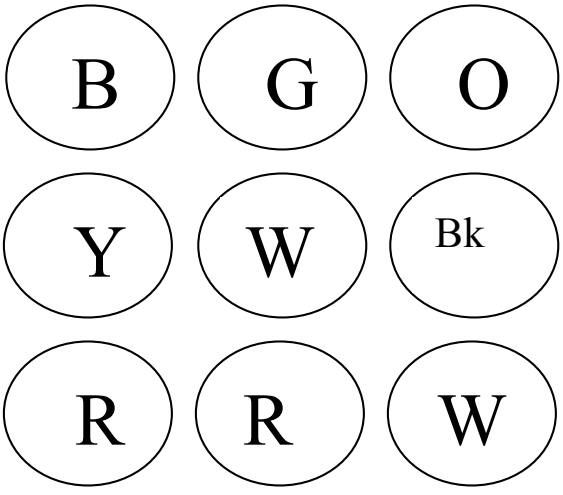
WEDNESDAY MORNING MATH –
LEVEL 3, PROBLEM 3

Logic Links Puzzle:

You will need to fill in the circles below with the following colors. (You don't need crayons though – just use abbreviations. R for red, o for orange, etc.)

2 red, 1 orange, 1 yellow, 1 green, 1 blue (b), 1 purple, 1 white, 1 black (bk)

Clue 1: Both red chips are on the bottom row.
Clue 2: The black chip is not on the left.
Clue 3: The black & yellow chips are on the same row, but do not touch.
Clue 4: The purple chip is directly to the right of a red chip.
Clue 5: The white chip is directly above a red chip.
Clue 6: The orange chip is on the right.
Clue 7: The yellow chip is directly below the blue chip.
Clue 8: The green chip is on the top row.



WEDNESDAY MORNING MATH -
LEVEL 4, PROBLEM 1

The Owen family has 3 children. Duncan's age plus Robert's age add to 29 years. Duncan's age plus Frances' age add to 27 years. Robert's age plus Frances' age add to 22 years. The difference between the oldest child and the youngest child is 7 years old.

Show your work below.

Duncan = 17
Robert = 12
Frances = 10

Duncan - Frances: 17 - 10 = 7 years

WEDNESDAY MORNING MATH - LEVEL 4, PROBLEM 2

Diophantus was a Greek mathematician who lived in the third century. He was one of the first mathematicians to use algebraic symbols.

Most of what is known about Diophantus's life comes from an algebraic riddle from around the early sixth century. The riddle states:

Diophantus's youth lasted one sixth of his life. He grew a beard after one twelfth more. After one seventh more of his life, he married. 5 years later, he and his wife had a son. The son lived exactly one half as long as his father, and Diophantus died four years after his son.

How many years did Diophantus live? 84 years

This is a tough problem to explain, but after the students have worked on this for a little bit, and tried some numbers, I would encourage them to look at the clues closely. His life is divided into sixths, twelfths, sevenths, and halves; therefore, his age must be divisible by those numbers. The smallest number that is a multiple of 6, 12, 7 and 2 is 84.

WEDNESDAY MORNING MATH - LEVEL 4, PROBLEM 3

Arrange the numbers 1, 2, 3, 4, & 7 so the indicated combination of the four numbers on each of the two squares is 6.