

3rd Grade Math

(7) Patterns, relationships, and algebraic thinking. The student uses lists, tables, and charts to express patterns and relationships. The student is expected to:

(A) generate a table of paired numbers based on a real-life situation such as insects and legs; and

(B) identify and describe patterns in a table of related number pairs based on a meaningful problem and extend the table.

Directions: Print the recording sheet for each student. To view the entire page, go to view>zoom>entire page. Read each problem aloud and highlight important information using the highlighter tool. Use the pen tool to record information in the table.

At 8:30 a.m. Kit and Lance begin a bicycle race. By 9:00 a.m., Kit has ridden 14 miles, and Lance has ridden 14 miles. At 9:30 a.m., Kit and Lance have each ridden 30 miles. At 10:00 a.m., Kit has ridden 45 miles. At 10:00 a.m., Lance has ridden 46 miles into the race. At 10:30 a.m., Kit has ridden 60 miles, and Lance has ridden 62 miles. If this pattern continues, how many miles will Lance have ridden at noon?

Time							
	9:00	9:30	10:00	10:30	11:00	11:30	12:00
Kit's Distance							
Lance's Distance							

Pull image to reveal answer.



Erik is a lifeguard. On Tuesday, he counted 14 people at the pool. On Wednesday, he counted 19 people at the pool. On Thursday, he counted 10 more people at the pool than he had counted on Tuesday. On Friday, Erik counted 29 people at the pool. If this pattern continues, on which day of the week will there be 44 people at the pool?

Day								
Number of People at the Pool	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.	Mon.	Tues.

Pull image to reveal answer.



Amy takes tennis lessons every Tuesday and Thursday. She is looking at her schedule of lessons. In May, Amy sees there are 9 lessons. In June, she is going on vacation, so she will have 3 fewer lesson than in May. In July, Amy sees there are 10 lessons. In August, Amy sees there are 2 more lessons than in June. In September, Amy sees there is 1 more lesson than in August. During which 2 months will Amy take the same number of tennis lessons?

Month					
Number of Tennis Lessons	May	June	July	August	Sept.

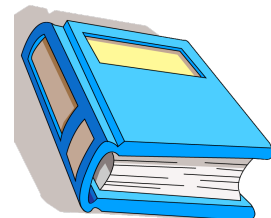
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Jim and Bob each start reading a 68 page book on the same day. On Monday, Jim reads 5 pages. On Tuesday, Jim stops at the end of page 10. On Wednesday, Jim stops at the end of page 15. Bob reads 7 pages on Monday. Bob stops at the end of page 14 on Tuesday. Bob stops at the end of page 21 on Wednesday. If this pattern continues, on what day will Bob be exactly 10 pages ahead of Jim?

	Day						
	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
Jim's Last Page Read							
Bob's Last Page Read							

Pull image to reveal answer.



At the park-and-ride, 45 people get on a bus. At the first stop, 3 people get off the bus. At the second stop, 9 people get off the bus. At the third stop, 10 people get off the bus. At the fourth stop, 8 people get off the bus. At the fifth stop, 4 people get off the bus. The bus driver is surprised that no one gets on the bus at any of the stops. How many people, besides the bus driver, are left on the bus after the people get off at the fifth stop?

Stop					
Number of People on the Bus after Each Stop	1st	2nd	3rd	4th	5th

Pull image to reveal answer.



Chris and Lev are selling tins of popcorn to raise money for their school. The fundraiser lasts for 8 weeks. The 1st week, Chris sells 3 tins, and Lev sells 1 tin. The 2nd week, Chris sells 4 tins, and Lev sells half as many tins as Chris. The 3rd week, Chris sells 5 tins, and Lev sells 3 tins. If this pattern continues, how many tins will they each sell on the final week of the fundraiser?

	Chris	Lev
Week 1		
Week 2		
Week 3		
Week 4		
Week 5		
Week 6		
Week 7		
Week 8		

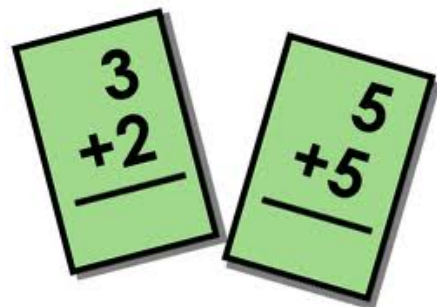
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Anna has a math test on Friday. She decides to make 27 flash cards to help her study. She studies 3 cards the first night. Each night she studies the cards from the night before, plus another 3 cards. How many cards will Anna study on the seventh night?

Night	Number of Cards Studied
1st	
2nd	
3rd	
4th	
5th	
6th	
7th	
8th	
9th	

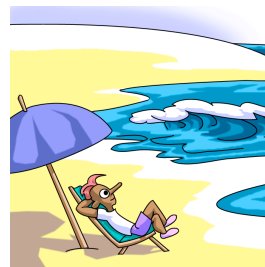
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Todd is 10, and his brother Mike is 13. The boys want to take a vacation to the beach. Their parents tell them that when the ones digit of Todd's age is half of the ones digit of Mike's age, the family will take a vacation to the beach. How old will each boy be when the family can take a vacation to the beach?

Todd's Age	Mike's Age 

Pull image to reveal answer.



A music concert starts at 8:00 pm. The gates open at 5:00 pm. At 5:30, 75 people are inside the gates. At 6:00, 125 people are inside the gates. At 6:30, 175 people are inside the gates. If this pattern continues, how many people will be inside the gates at 8:00 pm?

Time	Number of People Inside Gates
5:30	
6:00	
6:30	
7:00	
7:30	
8:00	

Pull image to reveal answer.



Jill and her sister Kara each have a puppy. Each day the girls throw a tennis ball for the puppies to fetch. On Monday, both puppies fetch the ball 1 time. On Tuesday, Jill's puppy fetches the ball 3 times and Kara's puppy fetches the ball 4 times. On Wednesday, both puppies fetch the ball 5 times. On Thursday, Jill's puppy fetches the ball 7 times, and Kara's puppy fetches the ball 8 times. On Friday, both dogs fetch the ball 9 times each. If this pattern continues, how many times will each dog fetch the ball on Sunday?

Day							
	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
Jill's Puppy's Fetches							
Kara's Puppy's Fetches							

Pull image to reveal answer.

