

Math Challenge #12



First Name: _____ **Last Name:** _____ **Grade:** _____
Teacher: _____ **Parent's email:** _____

Clocks and Calendar

Welcome to Math Challenge #12. In this challenge, we will be working on solving problems involving time. Humans started telling time centuries ago. Initially people guessed the time of day by looking at the sun's position. The sundial followed, which uses a shadow caused by the sun. The number the shadow rests on indicates the time.



Today we use analog clocks, which tell time using dials, and digital clocks, which display the hour and minutes. We also use AM (a.m.) and PM (p.m.) to indicate morning or night. AM (abbreviation for the Latin phrase Ante Meridiem) means it is morning time from midnight to noon. PM (Latin for Post Meridiem) is from noon to midnight.

We also organize our days for activities using a calendar. A calendar shows the days, weeks, and months of a specific years. Understanding the fundamentals of our calendar system is essential. Enjoy the following problems from reading clocks to solving time problems and calendar problems.

March 2019 						
Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Kinder & First Grade: solve at least 3 problems.
Second & Third Grade: solve at least 7 problems.
Fourth Grade and above: solve at least 12 problems.

Answer

- | | |
|--|---|
| 1. Zack's baseball practice started at 4:00 pm and ended at 6:00 p.m. How long did the practice last? | |
| 2. These are the days of the week: Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, and Saturday.
a. If yesterday was Friday, what day is tomorrow?
b. If tomorrow is Sunday, what day is the day before yesterday? | a.
b. |
| 3. Keya woke up at 6:00 a.m. Her brother woke up 3 hours later. Her mom woke up 2 hours before her brother. What time did Keya's mom wake up? |  |
| 4.  Mrs. Hein's math class starts at 1:30 pm and ends at the time shown on the clock. How long, in minutes, is her math class?
1 hour = 60 minutes | |
| 5. Last Saturday, Caitlin had breakfast at 8:30 am. Her drama rehearsal started an hour later and lasted for two hours. What time was her drama rehearsal over? |  |
| 6. Parker played video games for 45 minutes. If he finished playing at 6:15 pm, what time did he start playing? | |

7. Olga began working in her garden at 8:20 am. She planted carrots and potatoes for 30 minutes. She then trimmed the rose bushes for 25 minutes before taking a 10 minute break. At what time did her break end?

8. It takes 1 hour and 15 minutes to bake a cake. If I put the cake mixture in the oven at 2:20 pm, what time will it be ready?



9. Days of the week.
a. If January 1st falls on Thursday, what day is January 31?
b. If Halloween falls on Wednesday, what day is October 1?
c. If April Fool's day falls on Sunday, what day is March 21?



a.
b.
c.

10. Daily trains leave the station every half hour. The first train leaves at 9:10 a.m. What time will the seventh train leave?



11. A donut shop is open from 6 am to 2:30 pm on weekdays and from 6 am to 4:30 pm on Saturdays and Sundays. How long is the donut shop open in a week?



12. Angela takes 8 minutes to run one loop around the school track. Sophia can run the same loop 8 times in one hour. Who is faster?

13. How many minutes are there between 9:25 p.m. on Thursday and 1:19 a.m. on Saturday?

14. Days of the week.
a. If two days ago was Friday, what day is 3 days from today?
b. If yesterday was Saturday, what day is 100 days from today?
c. If tomorrow is Monday, what day is 300 days from today?



a.
b.
c.

15. Jim took 3 hours and 20 minutes to work out 100 challenging problems. Ian solved the same questions 35 minutes faster than Jim. Both of them started working on the problems at 2:30 p.m. At what time did Ian finish solving them?

16. Mr. and Mrs. Corrino can complete a job in 5 hours, working together. If Mr. Corrino works twice as long as Mrs. Corrino if each does the job alone, how many hours does it take Mrs. Corrino to complete the job alone?

17. A family is moving from Bellevue to Redmond. Their car traveling at 70 mph on Interstate 5 is **2 miles behind the U-Haul truck** traveling at 60 mph in the same direction. How long will it take the car to catch up to the U-Haul truck?

18. Two cyclists start at the same time from opposite ends of a course that is 45 miles long. One cyclist is riding at 14 mph and the second cyclist is riding at 16 mph. How long after they begin will they meet?