



Dear Parents:

As the summer draws near, we extend to you and your child our best wishes for a relaxing and enjoyable vacation. We hope that as you plan your time together, you also look forward to working with your child to review the math skills they have learned throughout this past school year. We believe that completing the summer math packet is a great tool to help ensure your child's math skills and knowledge are maintained throughout the summer enhancing their success in Mathematics in the upcoming school year.

As mathematics is a cumulative discipline with each level building upon previously learned concepts, our students are faced with increased rigor and a higher level of complexity. Our goal steers students towards independent mathematical thought. With this thought in mind, your child's teachers have developed summer math packets that address key concepts from the previous grade. These packets provide students with extra practice on needed skills to help maintain mastery, so they are fully prepared for the next year's Math class.

All students entering grades 6-8 are expected to complete the assigned summer math packet as a way to help keep your child's math skills sharp. For optimal results, it is highly recommended that they complete a portion of the packet each week. This will ensure that skills are being reinforced weekly and that the students do not become overwhelmed.

When your child returns in August, the summer math packet will be collected by your child's teacher by the end of the first full week of school. Your student's math teacher will then spend a few days in the first week of school reviewing the concepts covered within the summer math packet.

Students will receive a hard copy of the packet from their current teacher and electronic copies are available on the school website (<https://www.dentonmagnet.com/>).

We are hopeful that with your assistance, your child will experience a smooth transition in the upcoming school year and we can achieve our goal of reinforcing, maintaining, and extending skills acquired during this past school year.

Sincerely,

Denton Magnet Math Teachers

Summer Math Packet



Denton Magnet School of Technology

Grade 7 into 8

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- This packet is designed to help you retain the information you learned this year in 7th grade.
- The packet is due Wednesday, August 14, 2024.
- If you lose your packet, you can download a new copy from our website.

Have a great

Summer

No Calculator! Show your for every problem.

Directions: Answer each short answer question. Be sure to read each question *carefully* and show your work. No Work = No Credit.

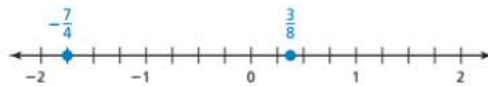
Week 1

1. A football team gains 2 yards on the first play, loses 5 yards on the second play, loses 3 yards on the third play, and gains 4 yards on the fourth play. What is the team's overall gain or loss for all four plays?

2. What is the value of the expression below when $a = -2$, $b = 3$, and $c = -5$?
- $$|a^2 - 2ac + 5b|$$

3. Which expression represents a *positive* integer?
- a. -6^2 b. $(-5)^2$ c. $(-3)^3$ d. -2^3

4. What is the distance between the two numbers on the number line?



5. What is the area of a triangle with a base length of $2\frac{1}{2}$ inches and a height of 2 inches?

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Week 2

6. What perimeter of the rectangle is 400 inches. What is the value of j ?



7. What is the value of the expression below?

$$-\frac{3}{8} \times \frac{2}{5}$$

8. The school sells 4 pencils for \$0.80. What is the cost of a pencil?

9. A gift box measures 8 inches by 4 inches by 2 inches. What is the least amount of wrapping paper needed to wrap the box?

10. The value of one of Kevin's baseball cards was \$6.00 when he first got it. The value of this card is now \$15.00. What is the percent increase in the value of the card?

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Week 3

11. A plumber charged \$12 for 15 minutes of work. At this rate, what would the plumber charge for 1 hour of work?

12. A package of 12 pencils costs \$2.04. Based on the cost of this package, what is the cost of 1 pencil?

13. What is the value of the expression below?

$$\frac{3}{4} \div 12$$

14. Danielle will use the instructions below to make a cleaning solution.

Add 13 cups of water to every 2 cups of concentrated cleaner.

Write a proportion that can be used to find w , the number of cups of water Danielle will add to 5 cups of concentrated cleaner.

15. The nutrition label on Erin's box of animal crackers states that 16 crackers contain 24 grams of carbohydrates. Erin ate 12 animal crackers from the box. What is the number of grams of carbohydrates in 12 animal crackers?

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Week 4

16. Which statement best describes a situation in which opposite quantities combine to make zero?

- a. Jack made 8 cups of soup and divided the soup into 8 containers.
- b. Mark deposited \$10 in his savings account and then withdrew \$10 from the account.
- c. Peter scored 2 goals in the first period of a hockey game and 2 goals in the second period.
- d. Andrew missed 4 questions on a test in which each question was worth 4 points.

17. What is the value of the expression below?

$$-13 - (-9)$$

18. The temperature at 6 p.m. was 16° F, which was 9° F lower than the temperature at noon. What is the temperature at noon?

19. Olive has 3 fair coins. She will toss each coin one time. Which of the following best describes the probability that all 3 coins will land with “heads” facing up?

- (a) Likely (b) Certain (c) Unlikely (d) Impossible

20. Write an expression equivalent to the expression below.

$$(-3m + 5) + (m - 11)$$

Week 5

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21. A sign is in the shape of a triangle. It has a base of 12 inches and an area of 120 square inches. What is the height of the triangle?
22. The base of a lampshade is in the shape of a circle and has a diameter of 13 inches. What is the circumference, to the nearest tenth of a inch, of the base of the lampshade? (Use 3.15 for π)
23. The ratio of the number of girls to the number of boys in a chess club is 3 to 2. There are 14 boys in the chess club. What is the number of girls in the chess club?
24. The weights, in ounces, of three different packages of cookies are listed below.
- | | | |
|-----|----------------|------|
| 7.7 | $7\frac{1}{7}$ | 7.25 |
|-----|----------------|------|
- List these weights in order from least to greatest.
25. A machine packs boxes at a constant rate of $\frac{2}{3}$ of a box every $\frac{1}{2}$ minute. What is the number of boxes per minute that the machine packs?

No Calculator! Show your for every problem.

26. In which situation could the quotient of -24 divided by 3 be used to answer the question?
- a. The temperature of a substance decreased by 24° C per minute for 3 minutes. What was the overall change of the temperature of the substance?
 - b. A football team lost 24 yards on one play, then gained 3 yards on the next play. How many total yards did the team gain on the two plays?
 - c. Julia withdrew a total \$24 from her bank account over 3 days. She withdrew the same amount each day. By how much did the amount in her bank account change each day?
 - d. A cookie jar contains 24 cookies. Each child receives 3 cookies. How many children are there?
27. A train traveled $\frac{1}{5}$ of the distance between two cities in $\frac{3}{4}$ hour. At this rate, how many hours will it take the train to travel the entire distance between these two cities?
28. What is the value of $\frac{9}{8}$ divided by $-\frac{11}{4}$?
29. An art teacher spent 7% of the art supply budget on colored paper. The art supply budget was \$1000. What was the total amount of money, in dollars, the art teacher spent on colored paper?
30. What value of n makes the equation below true?
- $$28 + n = 0$$