

Grade 5-6 Summer Math Packet - 2011

June 1, 2011

Dear Parents/Guardians of in-coming 6th graders:

I hope this letter finds you well and looking forward to a great summer.

As a way to assist your child in transitioning to the middle school, the Middlesex Math Department in collaboration with their elementary school colleagues, have created a **Grade 5-6 Summer Math Packet**. To access the packet, please visit our school website at www.darienps.org/middlesex and look for the link. The purpose of the packet is threefold, to:

- Reinforce skills that are deemed secure for all exiting fifth graders
- Identify areas of relative weakness for review that can be revisited *independently*
- Reduce the need for extensive review at the beginning of the school year, so new concepts can move forward

All concepts and skills reflected in the Math Packet have been previously taught and reviewed. There should be no need for specialized instruction – just time, space, and occasional guidance. An answer key has been provided to assist as well.

If you find that your child could use some additional practice and reinforcement, there are a number of websites available that your child will be familiar with from elementary school. The first two sites are links to March Math Madness.

- <http://www.darienps.org/mathmadness/>
- http://www.darienps.org/mathmadness/on_line/on_line.htm

These other websites are more interactive in nature.

- <http://www.shodor.org/interactivate/activities/>
- http://nlvm.usu.edu/en/nav/grade_g_3.html
- www.coolmath-games.com
- www.aaamath.com

Our collective hope is that completion of the packet will build anticipation for new learning, and confidence in your children that they have been well-prepared for the next level of Math. Although this packet is not a requirement we feel it can help ease the transition to middle school and help students reinforce their skills prior to the start of 6th grade.

Sincerely,

The MMS Math Department

5th to 6th grade Summer Math Packet

Copy and complete the number fact family.

1. $36 \div 9 = \underline{\quad ? \quad}$

$\underline{\quad ? \quad} \times 4 = 36$

$36 \div 4 = \underline{\quad ? \quad}$

$9 \times 4 = \underline{\quad ? \quad}$

2. $\underline{\quad ? \quad} - 8 = 5$

$5 + 8 = \underline{\quad ? \quad}$

$13 - \underline{\quad ? \quad} = 8$

$\underline{\quad ? \quad} + 5 = \underline{\quad ? \quad}$

Complete the statement.

3. 5 hours = $\underline{\quad ? \quad}$ minutes

4. 480 seconds = $\underline{\quad ? \quad}$ minutes

5. 76 hours = $\underline{\quad ? \quad}$ days $\underline{\quad ? \quad}$ hours

6. 12 minutes 45 seconds = $\underline{\quad ? \quad}$ seconds

7. 23 days = $\underline{\quad ? \quad}$ weeks $\underline{\quad ? \quad}$ days

8. 590 seconds = $\underline{\quad ? \quad}$ minutes $\underline{\quad ? \quad}$ seconds

Identify the place value of the bold faced digit. Then write the number in expanded form and in words.

9. 5**1**73

10. 2**4**3,065

Write the number in standard form.

11. $(5 \times 10,000) + (8 \times 100) + (2 \times 10) + (9 \times 1)$

12. six hundred twenty-four thousand, seventy-eight

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Compare the numbers.

13. 14,298 and 104,298
14. 9734 and 9743
15. 11,859 and 6108

Round the number to the place value of the bold faced digit.

16. 4**5**78
17. 1**2**,319
18. **4**5
19. 4**2**4,695
20. Write a related addition equation for $13 - 4 = 9$.
21. Write a related division equation for $8 \times 7 = 56$.

Find the sum or difference.

22. $76 + 35$
23. $148 + 63$
24. $264 + 327$
25. $838 + 306$
26. $1354 + 652$
27. $87 - 38$
28. $653 - 58$
29. $705 - 396$
30. $1035 - 251$
31. $15.8 + 24.5$
32. $5.32 + 24.15$
33. $8.71 - 6.29$

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34. $47.5 - 34.6$

Find the product or quotient.

35. 67×90

36. 23×41

37. 539×47

38. 2618×12

39. 8405×16

40. 673×1000

41. $4 \overline{) 240}$

42. $7 \overline{) 896}$

43. $9 \overline{) 306}$

44. $2464 \div 8$

45. $5826 \div 8$

46. $960 \div 10$

Estimate the sum.

47. $279 + 123 + 795$

48. $304 + 467 + 138 + 297$

49. $5581 + 2307 + 1425 + 8632$

50. $63 + 57 + 61 + 56$

Find a low and high estimate for the difference.

51. $541 - 293$

52. $715 - 452$

53. $5932 - 1978$

54. $8092 - 3715$

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Find a low and high estimate for the product.

- 55. 53×31
- 56. 24×763
- 57. 1729×83
- 58. 47×3674

Use compatible numbers to estimate the product.

- 59. 465×27
- 60. 39×2540

Find a low and high estimate for the quotient.

- 61. $496 \div 9$
- 62. $4691 \div 4$
- 63. $756 \div 7$
- 64. $3942 \div 6$

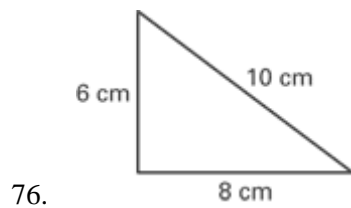
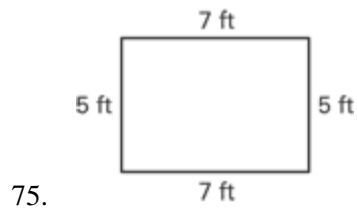
Use compatible numbers to estimate the quotient.

- 65. $521 \div 17$
- 66. $3875 \div 63$
- 67. You need \$27 for a concert ticket. You have \$19. How much more money do you need for the ticket?
- 68. You have 35 baseball cards in your baseball card collection. Your friend gives you 18 baseball cards. How many baseball cards do you have in your collection now?
- 69. You have 6 boxed sets of CDs. Each set has 3 CDs. How many CDs do you have?
- 70. You need to bring 45 muffins to a party. One batch of muffins makes 15. How many batches do you need to make?
- 71. You buy wrapping paper for \$4.57. You give the clerk \$10. How much change do you receive?
- 72. You need craft supplies. You buy beads for \$12.75, ribbon for \$4.50, felt for \$.99, and leather cord for \$6.35. How much did you spend on craft supplies?

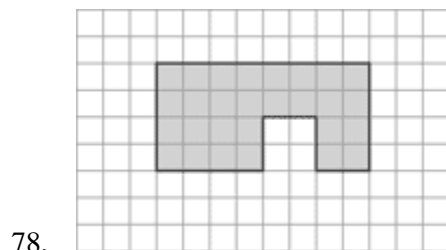
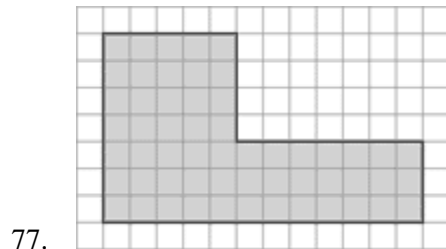
Write a fraction to represent the shaded region or part of the set.



Find the perimeter of the figure.

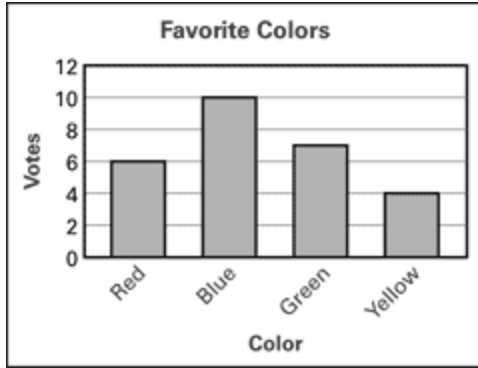


Find the area of the figure.



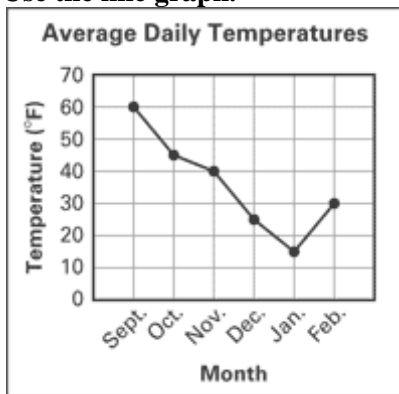
79. Using the set of whole numbers between 24 and 36, draw a Venn diagram in which set A consists of the odd numbers less than 30, and set B consists of the odd numbers greater than 27.

Use the bar graph.



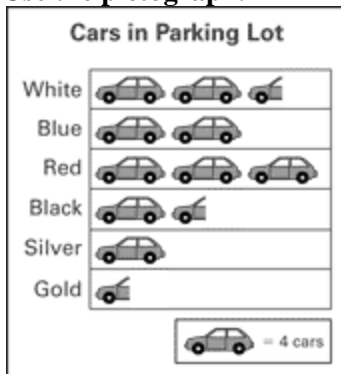
80. What color did 7 people vote for?
81. What color had 4 fewer votes than blue?
82. What was the total number of votes for red and yellow?

Use the line graph.



83. In which month was the average daily temperature the lowest?
84. What is the difference between the average daily temperatures for November and December?
85. What was the average daily temperature for October?

Use the pictograph.



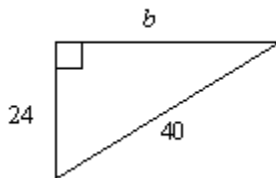
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86. How many black cars were in the parking lot?
87. How many fewer silver cars were in the parking lot than red cars?
88. Which color car has twice as many in the parking lot as silver cars?
89. Make a pictograph of the data.

The Ways Students Get the News	
News Source	Number of Students
Television	12
Radio	9
Newspaper	6
Word of Mouth	18

Evaluate the expression.

- ___ 90. $3 \times 6 + 6 - 4 \div 2$
a. 22 b. 10 c. 18 d. 19
- ___ 91. $16 \div 4 \times 4 + 7 - 6$
- ___ 92. What is the value of the expression $5(7 \times 2 + 5)$?
a. 70 b. 245 c. 95 d. 75
93. The perimeter of a figure is the sum of the lengths of its sides. Find the perimeter of the triangle when $b = 32$.



- ___ 94. Michael Brown, Nelson White, and Judith Black have hair that is brown, white, or black, but none of them has a name that matches the color of his or her hair. Michael does not have black hair. What is the color of each person's hair?
- a. Michael Brown has black hair; Nelson White has white hair; Judith Black has brown hair.
b. Michael Brown has white hair; Nelson White has black hair; Judith Black has brown hair.
c. Michael Brown has black hair; Nelson White has brown hair; Judith Black has white hair.
d. Michael Brown has brown hair; Nelson White has black hair; Judith Black has white hair.
95. Zoe plans to buy a \$2000 computer in twelve weeks. She is saving money each week. She saved \$1 the first week, \$2, the second week, \$4 the third week, and \$8 the fourth week. Her dad tells her that if she continues this pattern of saving, she will not have enough money in twelve weeks to buy the computer. Is he correct? Why or why not?
96. Write 67 pennies as a decimal part of a dollar.

Write the decimal in words.

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97. 18.234

Copy and complete the expanded form of the decimal.

98. $0.8352 = 0.8 + 0.03 + \underline{\quad} + \underline{\quad}$

The table shows the weights of several different figurines in a collection.

Figurine	Weight (ounces)
Wolf	3.16
Seal	3.08
Cougar	3.79
Falcon	2.93

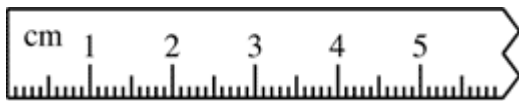
99. Write the weight of the falcon figurine in words.

- ___ 100. Which represents 6.10312 in words?
- six and one thousand three hundred twelve ten-thousandths
 - six and one thousand three hundred twelve hundred-thousandths
 - six and ten thousand three hundred twelve hundred-thousandths
 - six and ten thousand three hundred twelve ten-thousandths

Which choice completes the statement?

- ___ 101. 8 and 7 hundredths centimeters = ?
- 8.7 cm
 - 8.007 cm
 - 8.07 cm
 - 0.87 cm

Find the length of the line segment to the nearest tenth of a centimeter.



- ___ 102.
- 4.8 cm
 - 4.5 cm
 - 4.4 cm
 - 4.6 cm
103. How do you know that 0.32 km is the largest distance in the list of numbers below?
320 mm, 0.32 km, 32 cm, 0.32 m

Order the numbers from least to greatest.

104. 0.563, 0.923, 0.316, 0.143

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b. 7.01

d. 0.701

116. $396.9 \div 21$

Find the sum or difference.

117. $\frac{3}{16} + \frac{5}{16}$

a. $\frac{13}{32}$

b. $\frac{13}{16}$

c. $\frac{1}{2}$

d. 2

118. $\frac{6}{7} - \frac{5}{7}$

a. $\frac{2}{7}$

b. $1\frac{4}{7}$

c. 1

d. $\frac{1}{7}$

Find the sum or difference.

119. $\frac{5}{8} + \frac{1}{10}$

120. $\frac{8}{9} - \frac{1}{12}$

a. $\frac{89}{108}$

b. 1

c. $\frac{29}{36}$

d. $\frac{22}{27}$

5th to 6th grade Summer Math Packet Answer Section

1. ANS: 4; 9; 9; 36

PreTest | number fact family | divide | multiply

2. ANS:
13; 13; 5; 8; 13

PreTest | number fact family | add | subtract

3. ANS: 300

PreTest | unit conversion | hours | minutes

4. ANS: 8

PreTest | unit conversion | seconds | minutes

5. ANS: 3; 4

PreTest | unit conversion | hours | days

6. ANS: 765

PreTest | unit conversion | seconds | minutes

7. ANS: 3; 2

PreTest | unit conversion | days | weeks

8. ANS: 9; 50

PreTest | unit conversion | seconds | minutes

9. ANS:
hundreds; $(5 \times 1000) + (1 \times 100) + (7 \times 10) + (3 \times 1)$; five thousand, one hundred seventy-three

PreTest | place value | expanded form

10. ANS:
ten thousands; $(2 \times 100,000) + (4 \times 10,000) + (3 \times 1000) + (6 \times 10) + (5 \times 1)$; two hundred forty-three thousand, sixty-five

PreTest | place value | expanded form

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11. ANS:
50,829

PreTest | standard form

12. ANS:
624,078

PreTest | standard form

13. ANS:
 $14,298 < 104,298$

PreTest | compare

14. ANS:
 $9734 < 9743$

PreTest | compare

15. ANS:
 $11,859 > 6108$

PreTest | compare

16. ANS:
4600

PreTest | round | place value

17. ANS:
12000

PreTest | round | place value

18. ANS:
50

PreTest | round | place value

19. ANS:
420,000

PreTest | round | place value

20. ANS:
 $9 + 4 = 13$ or $4 + 9 = 13$

PreTest | related equation | equation | addition

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21. ANS:

$$56 \div 7 = 8 \text{ or } 56 \div 8 = 7$$

KEY: PreTest | related equation | equation | division

22. ANS:

111

PreTest | add

23. ANS:

211

PreTest | add

24. ANS:

591

PreTest | add

25. ANS:

1144

PreTest | add

26. ANS:

2006

PreTest | add

27. ANS:

49

PreTest | subtract

28. ANS:

595

PreTest | subtract

29. ANS:

309

PreTest | subtract

30. ANS:

784

PreTest | subtract

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31. ANS:
40.3

PreTest | decimals | add

32. ANS:
29.47

PreTest | decimals | add

33. ANS:
2.42

PreTest | decimals | subtract

34. ANS:
12.9

PreTest | decimals | subtract

35. ANS:
6030

PreTest | multiply

36. ANS:
943

PreTest | multiply

37. ANS:
25,333

PreTest | multiply

38. ANS:
31,416

PreTest | multiply

39. ANS:
134,480

PreTest | multiply

40. ANS:
673,000

PreTest | multiply

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41. ANS:
60

PreTest | divide

42. ANS:
128

PreTest | divide

43. ANS:
34

PreTest | divide

44. ANS:
308

PreTest | divide

45. ANS:
728 R2

PreTest | divide

46. ANS:
96

PreTest | divide

47. ANS:
1200

PreTest | estimate | add

48. ANS:
1200

PreTest | estimate | add

49. ANS:
18,000

PreTest | estimate | add

50. ANS:
240

PreTest | estimate | add

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51. ANS:
200; 400

PreTest | low estimate | high estimate | subtract

52. ANS:
200; 400

PreTest | low estimate | high estimate | subtract

53. ANS:
3000; 5000

PreTest | low estimate | high estimate | subtract

54. ANS:
4000; 6000

PreTest | low estimate | high estimate | subtract

55. ANS:
1500; 2400

PreTest | low estimate | high estimate | multiply

56. ANS:
14,000; 24,000

PreTest | low estimate | high estimate | multiply

57. ANS:
80,000; 180,000

PreTest | low estimate | high estimate | multiply

58. ANS:
120,000; 200,000

PreTest | low estimate | high estimate | multiply

59. ANS:
15,000

PreTest | estimate | multiply

60. ANS:
100,000

PreTest | estimate | multiply

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61. ANS:
50; 60

PreTest | low estimate | high estimate | divide

62. ANS:
1100; 1200

PreTest | low estimate | high estimate | divide

63. ANS:
100; 110

PreTest | low estimate | high estimate | divide

64. ANS:
600; 700

PreTest | low estimate | high estimate | divide

65. ANS:
26

PreTest | compatible numbers | estimate | divide

66. ANS:
60

PreTest | compatible numbers | estimate | divide

67. ANS:
\$8

PreTest | subtract

68. ANS:
53 baseball cards

PreTest | add

69. ANS:
18 CDs

PreTest | multiply

70. ANS:
3 batches

PreTest | divide

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71. ANS:
\$5.43

PreTest | subtract

72. ANS:
\$24.59

PreTest | add

73. ANS:
 $\frac{3}{8}$

PreTest | fractions

74. ANS:
 $\frac{5}{7}$

PreTest | fractions

75. ANS:
24 ft

PreTest | perimeter

76. ANS:
24 cm

PreTest | perimeter

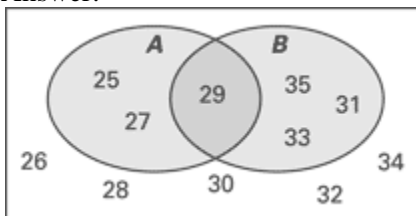
77. ANS:
56 square units

KEY: PreTest | area

78. ANS:
28 square units

KEY: PreTest | area

79. Answer:



PreTest | whole numbers | Venn diagram | odd numbers

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80. ANS:
green

PreTest | bar graph

81. ANS:
red

PreTest | bar graph | subtract

82. ANS:
10 votes

PreTest | bar graph

83. ANS:
January

PreTest | line graph

84. ANS:
15°F

PreTest | line graph | subtract

85. ANS:
45°F

PreTest | line graph

86. ANS:
6 cars

PreTest | pictograph

87. ANS:
8 cars

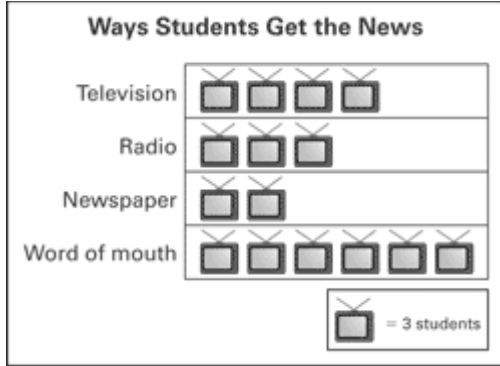
PreTest | pictograph | subtract

88. ANS:
blue

PreTest | pictograph | multiply

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89. ANS:
Answer:



PreTest | pictograph

90. ANS: A

order of operations | whole | decimal

91. ANS:
17

whole | order of operation

92. ANS: C

order of operations | whole

93. ANS:
 $32 + 24 + 40 = 96$ units

variable | solve | triangle | perimeter

94. ANS: B

problem solving | word | logic

95. ANS:
Diagrams will vary. Sample answer: Zoe's dad is not correct. She will actually have enough to buy the computer after 11 weeks, at which time she will have saved \$2047. In the twelfth week alone she will save \$2048.

patterns | word | diagram

96. ANS:
\$.67

money | decimal

97. ANS:

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Eighteen and two hundred thirty-four thousandths

word | decimal | write

98. ANS:

$$0.8352 = 0.8 + 0.03 + 0.005 + 0.0002$$

decimal | expanded form

99. ANS:

two and ninety-three hundredths

decimal | word | word form

100. ANS: C

decimal | word | word form

101. ANS: C

decimal | metric

102. ANS: D

centimeter | ruler | measure

103. ANS:

When you convert all the measurements to meters, 320 mm, 32 cm and 0.32 m all equal only 0.32 m , while 0.32 km equals 320 m.

extended response | metric | equivalent

104. ANS:

0.143, 0.316, 0.563, 0.923

order | compare | decimal

105. ANS: B

compare | decimal

106. ANS:

3.019, 3.199, 3.2, 3.299

Decimals | ordering

107. ANS: D

decimal | subtract | horizontal | regroup | hundredths-place

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108. ANS: D

whole number | decimal | subtract

109. ANS: B

:

whole number | decimal | multiplication

110. ANS:

1.87

KEY: whole number | decimal | multiplication

111. ANS:

31.92

whole number | decimal | multiplication

112. ANS: B

decimal | multiplication

113. ANS: D

decimal | multiplication

114. ANS: C

rectangle | decimal | area

115. ANS: C

whole number | division | decimal

116. ANS:

18.9

division | decimal

117. ANS: C

adding fractions | common denominators

118. ANS: D

subtracting fractions | common denominators

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119. ANS:

$$\frac{29}{40}$$

adding fractions | different denominators

120. ANS: C

subtracting fractions | different denominators