Summer Math Packet to Prepare for Algebra 1 Part A

Evaluate each expression. Scroll to the end to check your answers.

1) $3.6 - 2.21$

2) $(-4.5) - 6.2$

3) $(-0.7) - 4.7$

4) $(-5.1) + 3.7$

5) $\frac{4}{7} + \left(-\frac{12}{7}\right)$

6) $\left(-1\frac{2}{3}\right) - 2\frac{3}{8}$

7) $\left(-3\frac{2}{5}\right) + 3\frac{1}{3}$

8) $\left(-1\frac{1}{6}\right) - \left(-1\frac{1}{6}\right)$

9) $\frac{2}{5} + \left(-\frac{1}{2}\right)$

10) $\frac{1}{4} + \left(-\frac{1}{6}\right)$

11) $\frac{3}{4} + \left(-\frac{1}{2}\right)$

12) $\left(-\frac{3}{2}\right) - \frac{4}{7}$

13) $7 + (-5)$

14) $(-7) + 2$

15) $(-5) - 2$

16) $(-3) - 3$

17) $2\frac{2}{5} - \left(-3\frac{3}{4}\right)$

18) $\left(-7\frac{1}{5}\right) - 4\frac{7}{8}$

19) $\left(-2\frac{2}{3}\right) + 4\frac{2}{3}$

20) $\left(-3\frac{4}{5}\right) - 1\frac{1}{6}$

21) $(-2) - 4$

22) $6 - (-1)$

23) $7 + (-7)$

24) $(-7) + (-2)$

Find each quotient.

25) $-4.9 \div -2.2$

26) $-2.1 \div 5$

27) $-7.076 \div 9.8$

28) $-1\frac{1}{5} \div \frac{-1}{2}$

29) $-1\frac{1}{6} \div 4$

30) $\frac{13}{8} \div \frac{3}{5}$

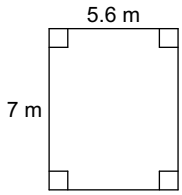
31) $-1 \div \frac{-9}{10}$

32) $-100 \div -10$

33) $-36 \div -4$

Find the area of each.

34)



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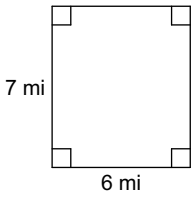

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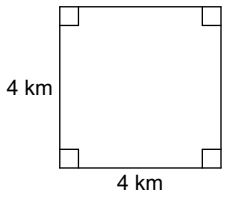

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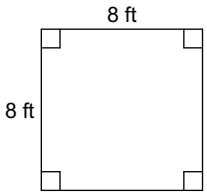
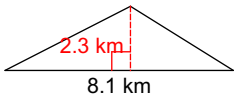
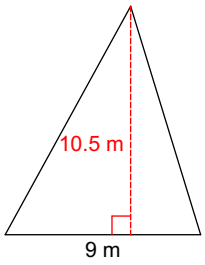


38)



39)



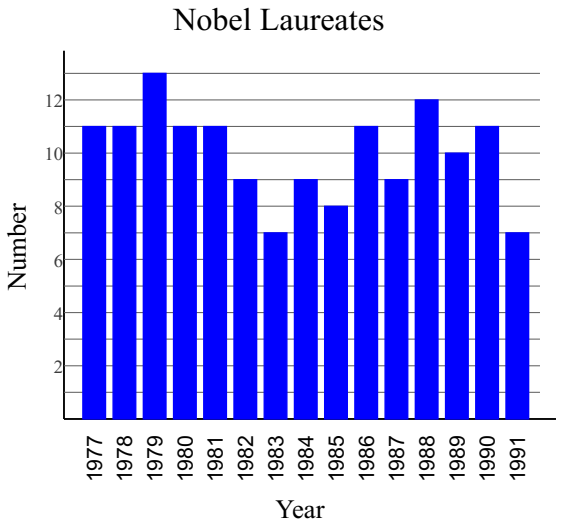
Find the median and mean for each data set.

40) Annual Household Income

16,150	11,650	20,300	14,150
33,850	11,100	11,250	15,150
13,350	10,000	9,650	15,450
9,500	15,700	32,950	

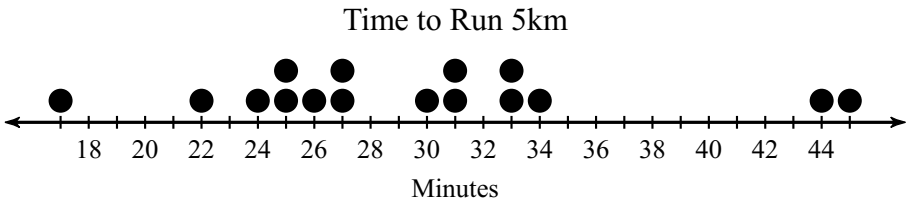
Find the mode, median, mean, and range for each data set.

41)



Find the median and mean for each data set.

42)



43)

Large Cities

City	Population
Wuhan	6,886,253
Kolkata	4,486,679
Busan	3,590,101
Beijing	21,150,000

City	Population
Wenzhou	3,039,439
Hong Kong	7,219,700
Tianjin	9,341,844
Lahore	11,318,745

City	Population
Johannesburg	4,434,827
Abidjan	4,765,000
Quanzhou	3,520,846
Ekurhuleni	3,178,470

City	Population
Shanghai	24,150,000
Harbin	4,280,701
Shantou	5,391,028
Istanbul	14,160,467

Simplify each expression.

44) $-v - 3v$

45) $-10 - x - 2x$

46) $n - 7 - 5n$

47) $10x + 6x$

48) $3(6 + 9n)$

49) $-5(-4a + 9)$

50) $-2(1 + 6n) - 9n$

51) $4(1 - r) - 1$

52) $-6(x+1)-9(5x-5)$

53) $9(2r-2)+10(1+r)$

Write each as a fraction.

54) 0.004

55) 0.85

56) 0.348

Write each as a percent. Round to the nearest tenth of a percent.

57) 0.03

58) 0.55

59) 0.74

Find each quotient.

60) $3.6 \div -8.3$

61) $7.5 \div 4.6$

62) $-3.5 \div 7.25$

Find each product.

63) -0.9×-2.43

64) -4.7×-9.074

65) 5.3×-1.7

Round each to the place indicated.

66) 6.958

67) 8.90611

68) 3.77399

Evaluate each expression.

69) $(2.6-2.24) \times 4.5$

70) $2.7 + 1.8 \times 3.1$

71) $3.6(4.9-1.8)$

Write each as a numeral.

72) three thousand, six hundred-thousandths

73) six thousand, sixty-six hundred-thousandths

Solve each equation.

74) $-1 = -5 + m$

75) $-14 = x - 4$

76) $-16 = k - 19$

77) $-8n = 0$

78) A recipe for pancakes calls for $5\frac{1}{6}$ cups of flour. Maria accidentally put in $5\frac{9}{10}$ cups. How many extra cups did she put in?

79) At a restaurant, Kim and her five friends decided to divide the bill evenly. If each person paid $18, then what was the total bill?

80) Last week Mofor ran 8 miles less than Arjun. Mofor ran 13 miles. How many miles did Arjun run?

81) A stray dog ate 9 of your muffins. That was $\frac{3}{5}$ of all of them! How many are left?

Evaluate each using the values given.

82) $h + 4j$; use $h = 3$, and $j = 2$

83) $x - y \div 5$; use $x = 5$, and $y = 5$

84) $y - x \div 4$; use $x = 4$, and $y = 2$

85) $p - q \div 2$; use $p = 4$, and $q = 2$

Find the GCF of each.

86) 35, 50

87) 36, 45

88) 32, 17

Find the LCM of each.

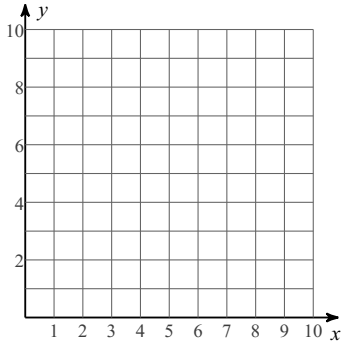
89) 36, 27

90) 16, 20

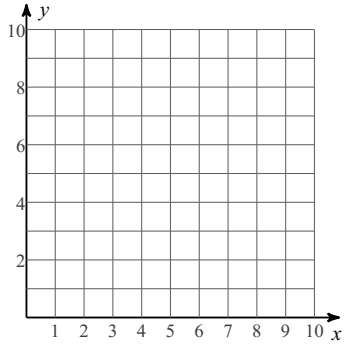
91) 35, 21

Plot each point.

92) $P(2, 1)$ $Q(2, 7)$ $R(0, 8)$
$S(1, 7)$ $T(9, 8)$



93) $S(8, 2)$ $T(6, 5)$ $U(7, 7)$
$V(4, 5)$ $W(10, 2)$



Find each square root.

94) $\sqrt{9}$

95) $\sqrt{4}$

96) $\sqrt{25}$

97) $\sqrt{1}$

Write each as an algebraic expression.

98) 9 more than x

99) 22 less than p

100) 4 squared

Find each percent change. Round to the nearest tenth of a percent. State if it is an increase or decrease.

101) From 98 to 44

102) From 59 to 66

103) From 58 to 38

Solve each problem.

104) 67% of what is 16?

105) What percent of 92 is 30?

106) 94 is 18% of what?

107) 103 is 34% of what?

Find the selling price of each item.

108) Original price of pants: $39.95
Discount: 47%

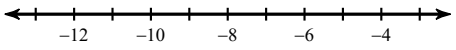
109) Original price of concert tickets: $79.95
Discount: 31%

110) Original price of a purse: $149.95
Discount: 40%

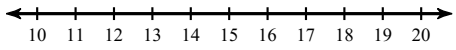
111) Original price of a tie: $33.50
Discount: 45%

Solve each inequality and graph its solution.

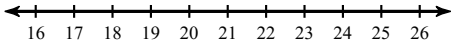
112) $3a < -24$



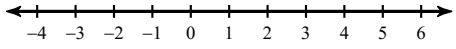
113) $a - 1 \geq 16$



114) $-8 + n \leq 12$



115) $60 \leq 20n$



ANSWER KEY:

Summer Math Packet to Prepare for Algebra 1 Part A

Evaluate each expression.

1) $3.6 - 2.21$

1.39

2) $(-4.5) - 6.2$

-10.7

3) $(-0.7) - 4.7$

-5.4

4) $(-5.1) + 3.7$

-1.4

5) $\frac{4}{7} + \left(-\frac{12}{7}\right)$ $-1\frac{1}{7}$

6) $\left(-1\frac{2}{3}\right) - 2\frac{3}{8}$ $-4\frac{1}{24}$

7) $\left(-3\frac{2}{5}\right) + 3\frac{1}{3}$ $-\frac{1}{15}$

8) $\left(-1\frac{1}{6}\right) - \left(-1\frac{1}{6}\right)$

0

9) $\frac{2}{5} + \left(-\frac{1}{2}\right)$ $-\frac{1}{10}$

10) $\frac{1}{4} + \left(-\frac{1}{6}\right)$ $\frac{1}{12}$

11) $\frac{3}{4} + \left(-\frac{1}{2}\right)$ $\frac{1}{4}$

12) $\left(-\frac{3}{2}\right) - \frac{4}{7}$ $-\frac{29}{14}$

13) $7 + (-5)$

2

14) $(-7) + 2$

-5

15) $(-5) - 2$

-7

16) $(-3) - 3$

-6

17) $2\frac{2}{5} - \left(-3\frac{3}{4}\right)$ $6\frac{3}{20}$

18) $\left(-7\frac{1}{5}\right) - 4\frac{7}{8}$ $-12\frac{3}{40}$

19) $\left(-2\frac{2}{3}\right) + 4\frac{2}{3}$

2

20) $\left(-3\frac{4}{5}\right) - 1\frac{1}{6}$ $-4\frac{29}{30}$

21) $(-2) - 4$

-6

22) $6 - (-1)$

7

23) $7 + (-7)$

0

24) $(-7) + (-2)$

-9

Find each quotient.

25) $-4.9 \div -2.2$

2.22727272727

26) $-2.1 \div 5$

-0.42

27) $-7.076 \div 9.8$

-0.722040816327

28) $-1\frac{1}{5} \div \frac{-1}{2}$ $2\frac{2}{5}$

29) $-1\frac{1}{6} \div 4$ $-\frac{7}{24}$

30) $\frac{13}{8} \div \frac{3}{5}$ $\frac{65}{24}$

31) $-1 \div \frac{-9}{10}$ $\frac{10}{9}$

32) $-100 \div -10$

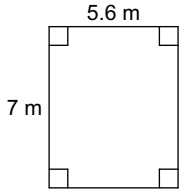
10

33) $-36 \div -4$

9

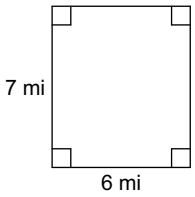
Find the area of each.

34)



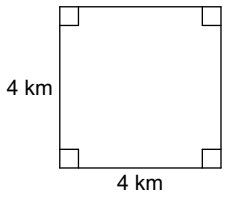
39.2 m²

35)



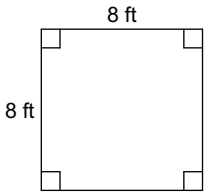
42 mi²

36)



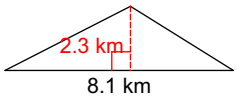
16 km²

37)



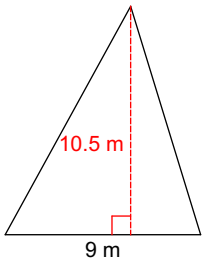
64 ft²

38)



9.315 km²

39)



47.25 m²

Find the median and mean for each data set.

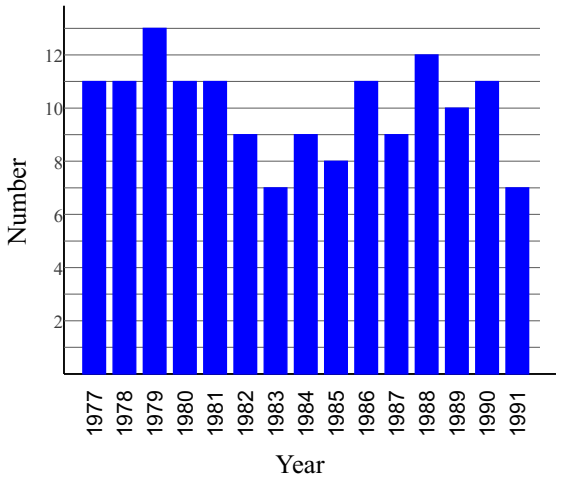
40) Annual Household Income

16,150	11,650	20,300	14,150
33,850	11,100	11,250	15,150
13,350	10,000	9,650	15,450
9,500	15,700	32,950	

Median = 14,150 and
Mean = 16,013.33

Find the mode, median, mean, and range for each data set.

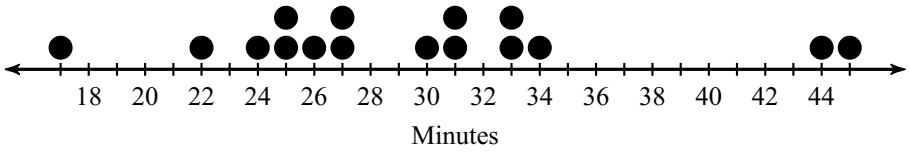
41) Nobel Laureates



Mode = 11, Median = 11, Mean = 10 and Range = 6

Find the median and mean for each data set.

42) Time to Run 5km



Median = 28.5 and Mean = 29.63

43) Large Cities

City	Population
Wuhan	6,886,253
Kolkata	4,486,679
Busan	3,590,101
Beijing	21,150,000

City	Population
Wenzhou	3,039,439
Hong Kong	7,219,700
Tianjin	9,341,844
Lahore	11,318,745

City	Population
Johannesburg	4,434,827
Abidjan	4,765,000
Quanzhou	3,520,846
Ekurhuleni	3,178,470

City	Population
Shanghai	24,150,000
Harbin	4,280,701
Shantou	5,391,028
Istanbul	14,160,467

Median = 5,078,014 and Mean = 8,182,131.25

Simplify each expression.

44) $-v - 3v$

$-4v$

45) $-10 - x - 2x$

$-10 - 3x$

46) $n - 7 - 5n$

$-4n - 7$

47) $10x + 6x$

$16x$

48) $3(6 + 9n)$

$18 + 27n$

49) $-5(-4a + 9)$

$20a - 45$

50) $-2(1 + 6n) - 9n$

$-2 - 21n$

51) $4(1 - r) - 1$

$3 - 4r$

52) $-6(x+1)-9(5x-5)$

$-51x+39$

53) $9(2r-2)+10(1+r)$

$28r-8$

Write each as a fraction.

54) 0.004 $\frac{1}{250}$

55) 0.85 $\frac{17}{20}$

56) 0.348 $\frac{87}{250}$

Write each as a percent. Round to the nearest tenth of a percent.

57) 0.03

3%

58) 0.55

55%

59) 0.74

74%

Find each quotient.

60) $3.6 \div -8.3$

-0.433734939759

61) $7.5 \div 4.6$

1.63043478261

62) $-3.5 \div 7.25$

-0.48275862069

Find each product.

63) -0.9×-2.43

2.187

64) -4.7×-9.074

42.6478

65) 5.3×-1.7

-9.01

Round each to the place indicated.

66) 6.958

7.0

67) 8.90611

8.906

68) 3.77399

3.7740

Evaluate each expression.

69) $(2.6-2.24)\times 4.5$

1.62

70) $2.7+1.8\times 3.1$

8.28

71) $3.6(4.9-1.8)$

11.16

Write each as a numeral.

72) three thousand, six hundred-thousandths

0.03006

73) six thousand, sixty-six hundred-thousandths

0.06066

Solve each equation.

74) $-1 = -5 + m$

$\{4\}$

75) $-14 = x - 4$

$\{-10\}$

76) $-16 = k - 19$

$\{3\}$

77) $-8n = 0$

$\{0\}$

78) A recipe for pancakes calls for $5\frac{1}{6}$ cups of flour. Maria accidentally put in $5\frac{9}{10}$ cups. How many extra cups did she put in?

$\frac{11}{15}$

79) At a restaurant, Kim and her five friends decided to divide the bill evenly. If each person paid $18, then what was the total bill?

$108

80) Last week Mofor ran 8 miles less than Arjun. Mofor ran 13 miles. How many miles did Arjun run?

21

81) A stray dog ate 9 of your muffins. That was $\frac{3}{5}$ of all of them! How many are left?

6

Evaluate each using the values given.

82) $h + 4j$; use $h = 3$, and $j = 2$

11

83) $x - y \div 5$; use $x = 5$, and $y = 5$

4

84) $y - x \div 4$; use $x = 4$, and $y = 2$

1

85) $p - q \div 2$; use $p = 4$, and $q = 2$

3

Find the GCF of each.

86) 35, 50

5

87) 36, 45

9

88) 32, 17

1

Find the LCM of each.

89) 36, 27

108

90) 16, 20

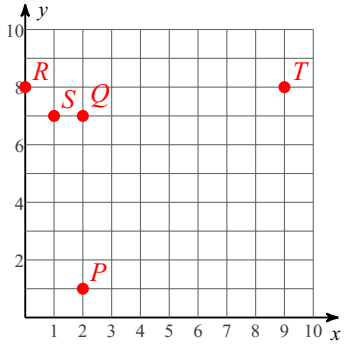
80

91) 35, 21

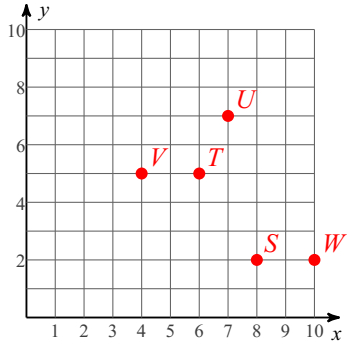
105

Plot each point.

92) $P(2, 1)$ $Q(2, 7)$ $R(0, 8)$
$S(1, 7)$ $T(9, 8)$



93) $S(8, 2)$ $T(6, 5)$ $U(7, 7)$
$V(4, 5)$ $W(10, 2)$



Find each square root.

94) $\sqrt{9}$

3

95) $\sqrt{4}$

2

96) $\sqrt{25}$

5

97) $\sqrt{1}$

1

Write each as an algebraic expression.

98) 9 more than x

$x + 9$

99) 22 less than p

$p - 22$

100) 4 squared

4^2

Find each percent change. Round to the nearest tenth of a percent. State if it is an increase or decrease.

101) From 98 to 44

55.1% decrease

102) From 59 to 66

11.9% increase

103) From 58 to 38

34.5% decrease

Solve each problem.

104) 67% of what is 16?

23.9

105) What percent of 92 is 30?

32.6%

106) 94 is 18% of what?

522.2

107) 103 is 34% of what?

302.9

Find the selling price of each item.

108) Original price of pants: $39.95
Discount: 47%

$21.17

109) Original price of concert tickets: $79.95
Discount: 31%

$55.17

110) Original price of a purse: $149.95
Discount: 40%

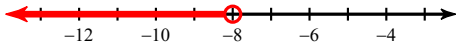
$89.97

111) Original price of a tie: $33.50
Discount: 45%

$18.43

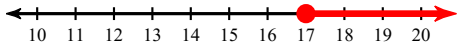
Solve each inequality and graph its solution.

112) $3a < -24$



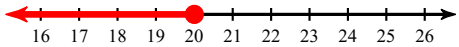
$a < -8$

113) $a - 1 \geq 16$



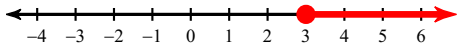
$a \geq 17$

114) $-8 + n \leq 12$



$n \leq 20$

115) $60 \leq 20n$



$n \geq 3$