

Welcome to math 7/8

We are very excited to work with you this upcoming year.

Please use the following pages of problems to practice the prerequisite skills needed to be most prepared for math 7/8. The summer helpful math tips will give you some reminders on different topics. When you are finished, you may use the following website to preview our 1st three units in math 7/8. The 1st three units in math 7/8 include 7th grade math units 4,5 and 6. The topics from the link below include geometric figures, geometric applications, inferences, and probability.

<http://www.gavirtualllearning.org/Resources/SharedMS7thMath.aspx>

Have a great summer!



Math 7/8 summer packet

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Draw a box-and-whisker plot for each data set.

1) Annual Precipitation (Inches)

31.4 48.6 12.4 70 5.4 10.8
 25 46 11.8 24 6.4 62
 30.2 59.8 65.6 70 32.6

2) Annual Household Income

16,200 19,250 33,300 12,050
 8,450 23,800 12,100 32,000
 13,350 10,500 12,950 22,650
 13,500 16,900 12,000

3)

Nobel Laureates

Name	Age
John Cromwell Mather	60
Venkatraman Ramakrishnan	57
Roald Hoffmann	44
Jean-Marie Gustave Le Clézio	68
Barack Hussein Obama Jr.	48

Name	Age
Luc Antoine Montagnier	76
Günter Wilhelm Grass	72
Christian Marie René Joseph de Duve	57
Irwin Allan Rose	78
Ei-ichi Negishi	75

Name	Age
David Hunter Hubel	55
Gao Xingjian	60
James McGill Buchanan Jr.	67
Ronald Harry Coase	80
Adolfo Pérez Esquivel	49

4)

Academy Awards

Movie	# Awards
Ordinary People	4
Around the World in 80 Days	5
Out of Africa	7
All the King's Men	3
Wings	2
All About Eve	6
An American in Paris	6
A Man for All Seasons	6

Movie	# Awards
Annie Hall	4
It Happened One Night	5
Lord of the Rings: Return of the King	11
Crash	3
Unforgiven	4
Cimarron	3
The Departed	4

Draw a histogram for each data set.

5) Age at First Job

18	11	14	18	14	16	18
17	13	18	18	13	18	15
14						

6) Melting Point

Substance	°C	Substance	°C
Cobalt	1,495	Gold	1,064
Plutonium	639.4	Iron	1,538
Platinum	1,768	Copper	1,085
Potassium	63.4	Nickel	1,455
Phosphorus	44.2	Sodium	97.7
Carbon	3,550	Silicon	1,414
Water	0	Tin	231.9
Zinc	419.5		

Draw a dot plot for each data set.

7) Basketball Tournament Champions

School	Times Won	School	Times Won	School	Times Won	School	Times Won
Loyola-Chicago	1	Duke	5	UNLV	1	Michigan	1
Cincinnati	2	Oregon	1	Indiana	5	Connecticut	4
Stanford	1	Michigan State	2	Florida	2	Kansas	3
Ohio State	1	Arkansas	1	Georgetown	1		

8) Age at First Job

12	15	20	18	11	17	17
20	17	13	17	19	15	17
15	11	18				

Solve each equation.

9) $8(7 - 5b) = -184$

10) $8(1 - 4v) = 264$

11) $7(-2x + 3) - x = 96$

12) $-2 + 4(1 - 4x) = 82$

13) $\frac{15}{4}x + 2 - \frac{9}{5} = \frac{47}{10}$

14) $-\frac{1}{2}n - 2n = \frac{5}{4}$

15) $\frac{5}{4} = -\frac{11}{6}x + x$

16) $\frac{4}{3}n + \frac{14}{5} - \frac{7}{4} = -\frac{19}{20}$

17) $-1.6a + 2.5a = -4.41$

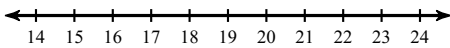
18) $-1.75 = 4.8n - 2.3n$

19) $-5.3n - 0.8 + 3.45n = 5.305$

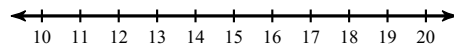
20) $16.316 = -5.3x + 4.1 + 0.21x$

Solve each inequality and graph its solution.

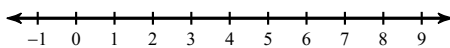
21) $10 + \frac{m}{-7} < 7$



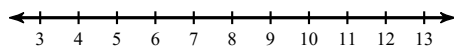
22) $-11(-2 + x) > -154$



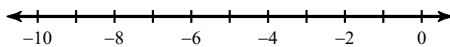
23) $12(x + 9) < 180$



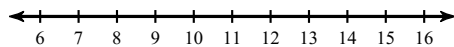
24) $-3(n + 10) \leq -51$



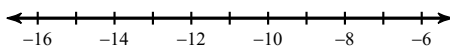
25) $7(m - 8) \leq -105$



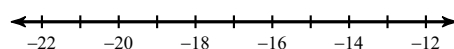
26) $4(p + 3) \geq 52$



27) $-8(4 + b) > 64$

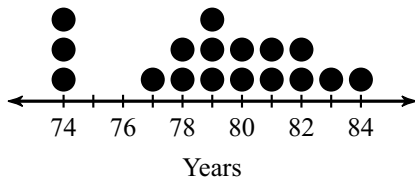


28) $\frac{r}{9} - 6 < -8$



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

29) Life Expectancy by State



30)

Birth Rate

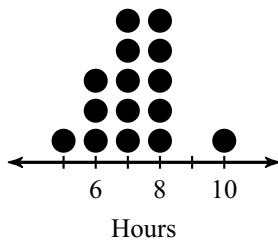
Country	Births/woman
Macedonia	1.59
Benin	5.04
Sierra Leone	4.83
Kenya	3.54

Country	Births/woman
Vanuatu	3.36
Guyana	2.14
Sudan	3.92
Greece	1.42

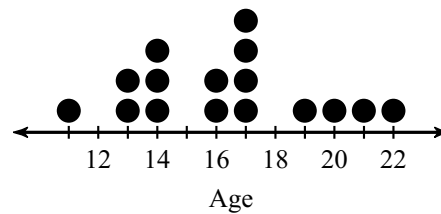
Country	Births/woman
Denmark	1.73
Yemen	4.09
Italy	1.42
Costa Rica	1.91

Country	Births/woman
Myanmar	2.18
Taiwan	1.11
Nigeria	5.25
Micronesia	2.55

31) Hours Slept



32) Age at First Job



Evaluate each expression.

33) $\left(3\frac{3}{4} \div \frac{-1}{3}\right)\left(\frac{-8}{5}\right)$

34) $\frac{1}{5} - -1 \div 3\frac{2}{3}$

35) $2.56 - (4.6)(3.2)$

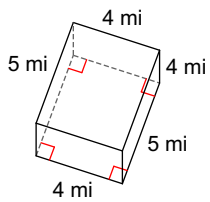
36) $(2 - -2.6) \div 1.7$

37) $(9 - -6) \div (1 - 4 - -6)$

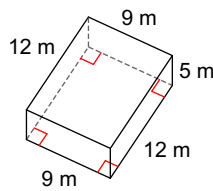
38) $12 \div (((-3)(4 + (2)(-1))))$

Find the surface area of each figure. Round your answers to the nearest hundredth, if necessary.

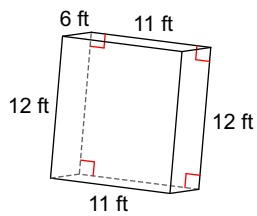
39)



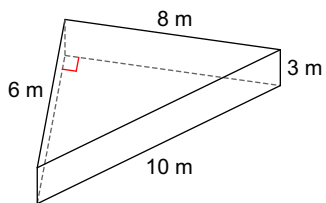
40)



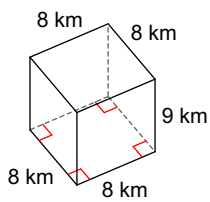
41)



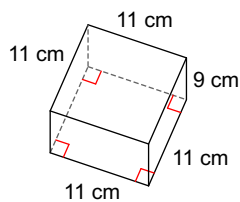
42)



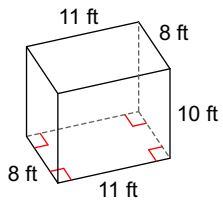
43)



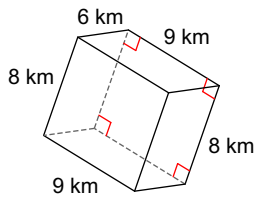
44)



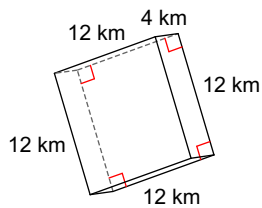
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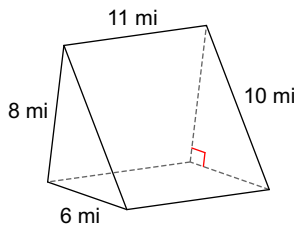
46)



47)

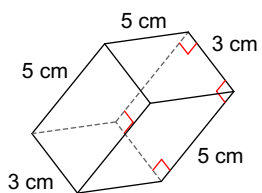


48)

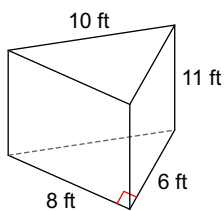


Find the volume of each figure. Round your answers to the nearest hundredth, if necessary.

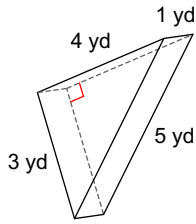
49)



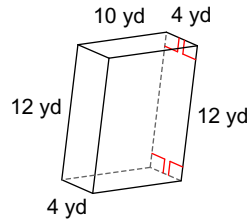
50)



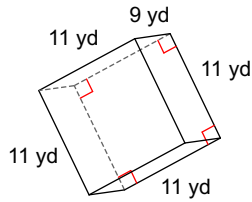
51)



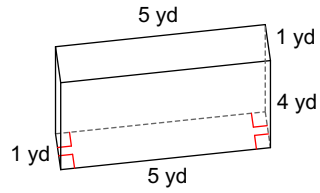
52)



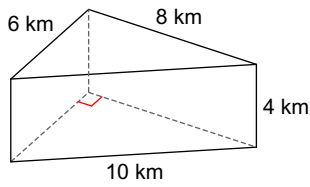
53)



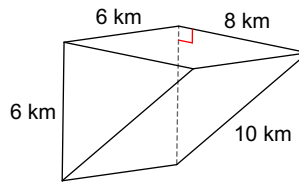
54)



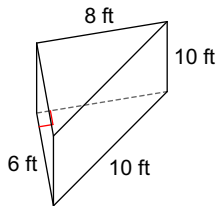
55)



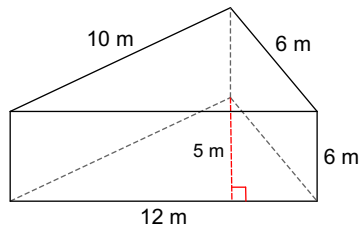
56)



57)



58)



Solve each proportion.

59) $\frac{2}{7} = \frac{v}{5}$

60) $\frac{6}{5} = \frac{a}{7}$

61) $\frac{b}{5} = \frac{4}{7}$

62) $\frac{10}{v} = \frac{6}{3}$

63) $\frac{2}{x} = \frac{4}{2}$

64) $\frac{5v}{5} = \frac{3}{10}$

65) $\frac{7}{3} = \frac{a}{5}$

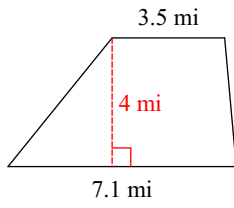
66) $\frac{10}{6} = \frac{r}{10}$

67) $\frac{r}{2} = \frac{4}{6}$

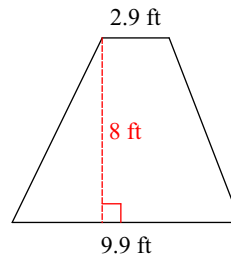
68) $\frac{6}{n} = \frac{2}{6}$

Find the area of each.

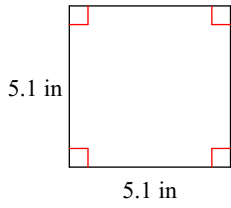
69)



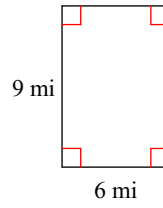
70)



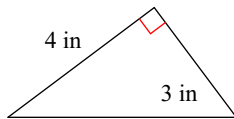
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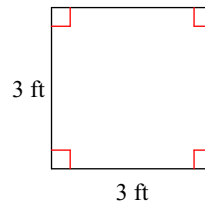
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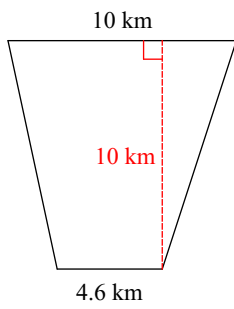
73)



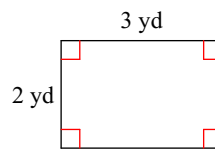
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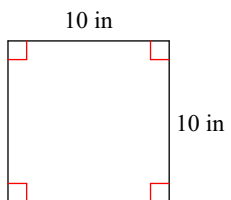
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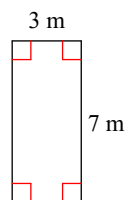
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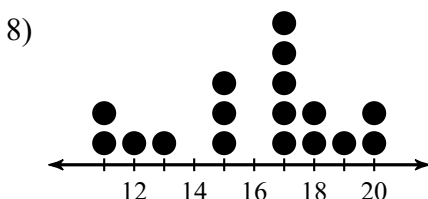
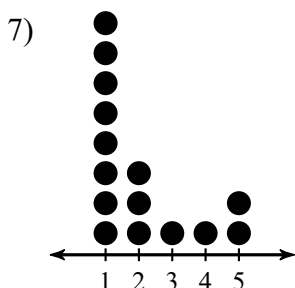
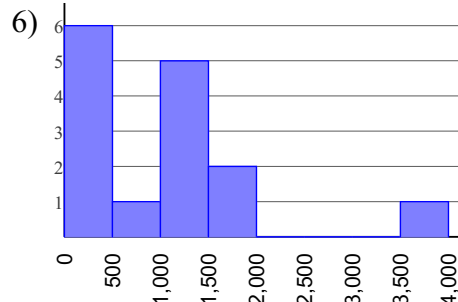
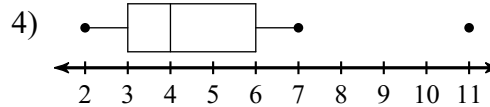
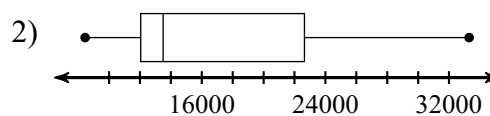
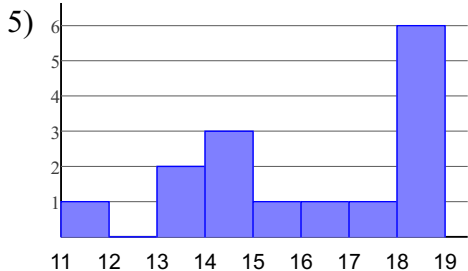
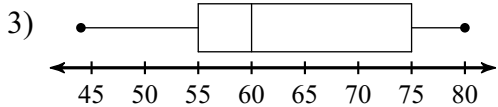
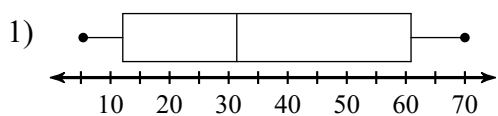
77)



78)



Answers to Math 7/8 summer packet



9) {6}

10) {-8}

11) {-5}

12) {-5}

13) $\left\{\frac{6}{5}\right\}$

14) $\left\{-\frac{1}{2}\right\}$

15) $\left\{-\frac{3}{2}\right\}$

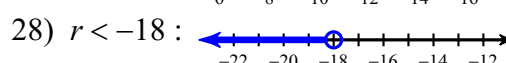
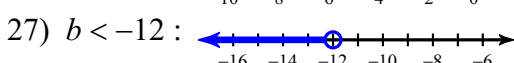
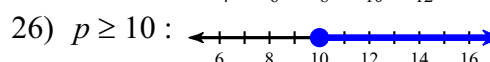
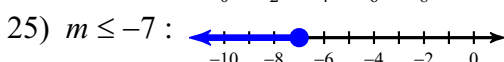
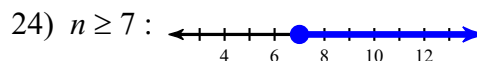
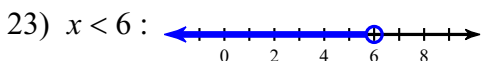
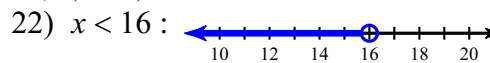
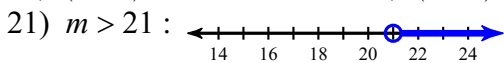
16) $\left\{-\frac{3}{2}\right\}$

17) {-4.9}

18) {-0.7}

19) {-3.3}

20) {-2.4}



29) Mode = 74 and 79, Median = 79 and Mean = 79.12

30) Mode = 1.42, Median = 2.365 and Mean = 2.88

31) Mode = 7 and 8, Median = 7 and Mean = 7.2

32) Mode = 17, Median = 16.5 and Mean = 16.31

33) 18

34) $\frac{26}{55}$

35) -12.16

36) 2.70588235294

37) 5

38) -2

39) 112 mi²

40) 426 m²

41) 540 ft²

42) 120 m²

43) 416 km²

44) 638 cm²

45) 556 ft²

46) 348 km²

47) 480 km²

48) 312 mi²

49) 75 cm³

50) 264 ft³

51) 6 yd³

52) 480 yd³

53) 1089 yd³

54) 20 yd³

55) 96 km³

56) 144 km³

57) 240 ft³

58) 180 m³

59) {1.43}

60) {8.4}

61) {2.86}

62) {5}

63) {1}

64) {0.3}

65) {11.67}

66) {16.67}

67) {1.33}

68) {18}

69) 21.2 mi²

70) 51.2 ft²

71) 26.01 in²

72) 54 mi²

73) 6 in^2
77) 100 in^2

74) 9 ft^2
78) 21 m^2

75) 73 km^2

76) 6 yd^2