Calculator Test 9
2010 - 2011

11. $$\frac{78+92+88+96+98+x}{6}=90$$
$$78+92+88+96+98+x=(90)(6)$$
$$x=(90)(6)-78-92-88-96-98$$
$$x=88.0$$

12. $$4x+x=25$$
$$5x=25$$
$$x=5$$

13. Median is the middle piece of data.
Even number of data means that you have to average the 2 middle data.

$$median=\frac{33.7+35.8}{2}$$
$$=34.8$$

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24. Use the conversion key to convert liters to gallons.

24 liters = 6.34 gallons

25. $$\frac{5_8\ miles}{65\ \sec}x\frac{3600\ \sec}{1\,hr}=34.6$$

26. $$\frac{s\sqrt{3}}{2}=29.5$$
$$s\sqrt{3}=(29.5)(2)$$
$$s=\frac{(29.5)(2)}{\sqrt{3}}$$
$$s=34.1$$

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35. $$x=5(90-x)+12$$
$$x=450-5x+12$$
$$6x=462$$
$$x=77.0$$

36. $$1\pi\ radians=180^o$$
$$\frac{12}{5}\pi\ radians=\frac{12}{5}(180)$$
$$\frac{12}{5}\pi\ radians=432^o$$

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37. $C = 2\pi r$

$$r = \frac{C}{2\pi}$$

$$r = \frac{(4)(401)}{2\pi}$$

$$r = 255$$

38. $A = LW$

$$W = \frac{A}{L}$$

$$MN = \sqrt{L^2 + W^2}$$

$$= \sqrt{L^2 + \left(\frac{A}{L}\right)^2}$$

$$= \sqrt{(.000875)^2 + \left(\frac{.00000191}{.000875}\right)^2}$$

$$= 2.35\ x\ 10^{-3}$$

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47. $log\ 10233^{1010} = 1010\ log\ 10233$

$= 4050.10300387$

$=$ *In the answer blank, write:* $x\ 10^{4050}$

$=$ *Subtract* 4050 *from the display*

$=$ *Hit the* 10^x *key and write* 1.27

Ans: 1.27×10^{4050}

48. $$\frac{P_1}{P_2} = \frac{V_2}{V_1}$$

$$\frac{12\ Pascals}{5\ Pascals} = \frac{x\ liters}{205\ liters}$$

$$5x = (12)(205)$$

$$x = \frac{(12)(205)}{5}$$

$$x = 492$$

49. $x = \sqrt{4893^2 - 2002^2}$

$= 4460$

50. $\tan\theta = \frac{\text{Opposite}}{Adjacent}$

$$\theta = \tan^{-1}\frac{\text{Opposite}}{Adjacent}$$

$$\theta = \tan^{-1}\frac{1.259}{.7475}$$

$$\theta = 59.3$$

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59. $V_{Sphere} = V_{Cylinder}$

$$\frac{4}{3}\pi r_1^3 = \pi r_2^2 h$$

$$\frac{4}{3}\pi r_1^3 = \pi (3.45)^2 (8.34)$$

$$\frac{4}{3}\pi r_1^3 = 312$$

$$r_1^3 = \frac{312}{\frac{4}{3}\pi}$$

$$r = \sqrt[3]{\frac{312}{\frac{4}{3}\pi}}$$

$$r = 4.21$$

60. $7x + 9y = 33$

$$9y = -7x + 33$$

$$y = -\frac{7}{9}x + \frac{33}{9}$$

$$m = -\frac{7}{9} = -.778$$

61. $TA = A_{Trapezoid} + A_{Semi-circle}$

$$= \frac{d_1 d_2}{2} + \frac{\pi r^2}{2}$$

$$= \frac{(662)(2127)}{2} + \frac{\pi\left(\frac{\sqrt{331^2 + 1063.5^2}}{2}\right)^2}{2}$$

$$= \frac{(662)(2127)}{2} + \frac{\pi\left(\frac{331^2 + 1063.5^2}{4}\right)}{2}$$

$$= 1.19\ x\ 10^6$$

62. $d = s\sqrt{3}$

$$s = \frac{d}{\sqrt{3}}$$

$$V = s^3$$

$$= \left(\frac{d}{\sqrt{3}}\right)^3$$

$$= \left(\frac{.98}{\sqrt{3}}\right)^3$$

$$= .181$$

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71. $$A = \frac{nb^2}{4\tan\left(\frac{\pi}{n}\right)} = \frac{10(876.5)^2}{4\tan\left(\frac{\pi}{10}\right)} = 5.91x10^6$$

72. $$Odds(sum > 5) = \frac{26}{10} = 2.60$$

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73. $$s = \frac{a+b+c}{2} = \frac{11+25+17}{2} = 26.5$$

$$A = \sqrt{26.5(26.5-11)(26.5-25)(26.5-17)} = 76.5$$

74. $$LSA = \pi rl = \pi(.014)\left(\sqrt{.033^2 + .014^2}\right) = .00158$$