

Calculator Test 5
2010 - 2011

11. $\frac{4526 \text{ miles}}{540 \text{ mph}} \times 60 = 503$

12. $(x) + (x+1) + (x+2) = 966$
 $3x + 3 = 966$
 $x = \frac{966 - 3}{3}$
 $x = 321$
Largest integer = $(x+2) = 323$

13. The median is the middle value.

$$5\pi \approx 15$$
$$\sqrt{5} \approx 2.24$$
$$e^5 \approx 148$$
$$10^5 = 100000$$
$$\ln 5 \approx 1.6$$
$$\log 5 \approx .7$$
$$\frac{1}{5} = .2$$

The median is 2.24

24. $\frac{x}{2.5} = \frac{4}{\frac{7}{12}}$
 $\frac{7}{12}x = (4)(2.5)$
 $x = \frac{(4)(2.5)}{\frac{7}{12}}$
 $x = 17.1$

25. $\frac{1 \text{ m}}{3.28 \text{ ft}} = \frac{x \text{ m}}{24 \text{ ft}}$
 $3.28x = 24$
 $x = \frac{24}{3.28}$
 $x = 7.32$

Calculator Test 5
2010 - 2011

26.
$$\text{Together} = \frac{\text{Product}}{\text{Sum}}$$

$$\text{Together} = \frac{\left(2\frac{35}{60}\right)\left(1\frac{55}{60}\right)}{\left(2\frac{35}{60}\right) + \left(1\frac{55}{60}\right)}$$

$$\text{Together} = 1.10$$

Another way to work the problem

$$2\frac{35}{60} = \frac{155}{60} = 2.58$$

$$1\frac{55}{60} = \frac{115}{60} = 1.92$$

Completed per hour

$$\frac{1}{2.58} \text{ and } \frac{1}{1.92}$$

Adding their labor

$$\frac{1}{2.58} + \frac{1}{1.92} = 9.08$$

So,

$$\frac{1}{t} = \frac{9.08}{1}$$

$$t = 1.10$$

35.
$$2\pi \text{ radians} = 360^\circ$$

$$1\pi \text{ radians} = 180^\circ$$
 So,
$$\frac{6}{7}\pi \text{ radians} = \frac{6}{7}(180) = 154^\circ$$

36.
$$1:5:2 = \frac{1}{8}:\frac{5}{8}:\frac{2}{8}$$
 So,
$$\frac{1}{8}(180) = 22.5^\circ$$

37.
$$P = r + r + \frac{C}{4}$$

$$= r + r + \frac{2\pi r}{4}$$

$$= .912 + .912 + \frac{2\pi(.912)}{4}$$

$$= 3.26$$

38.
$$d = s\sqrt{2}$$

$$s = \frac{d}{\sqrt{2}}$$

$$s = \frac{671}{\sqrt{2}}$$

$$A = s^2$$

$$= \left(\frac{671}{\sqrt{2}}\right)^2$$

$$= 2.25 \times 10^5$$

**Calculator Test 5
2010 - 2011**

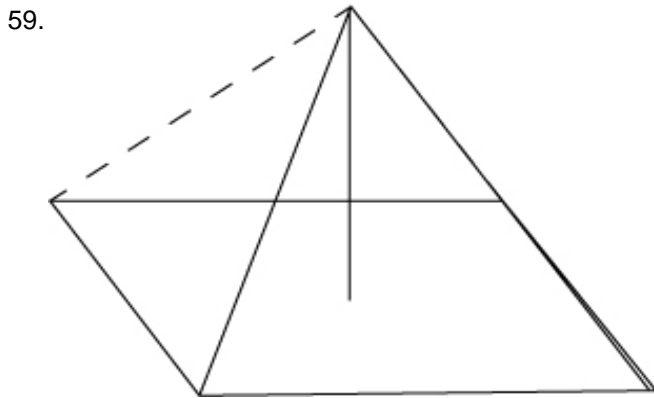
47. *Examples* $(-2)^2 = 4$
 $(-2)^3 = -8$
 $(-2)^4 = 16$
 $(-2)^5 = -32$

Since this is to an odd power, the answer will be negative
 $\log 457^{909} = 909 \log 457$
 $= 2417.86382586\dots$
 Write in the answer blank, $\times 10^{2417}$
 Subtract 2417 from the display
 The display should read, .86382586...
 Now hit the 10^x key and write your answer in answer blank
 Remember it will be negative
 $= -7.31 \times 10^{2417}$

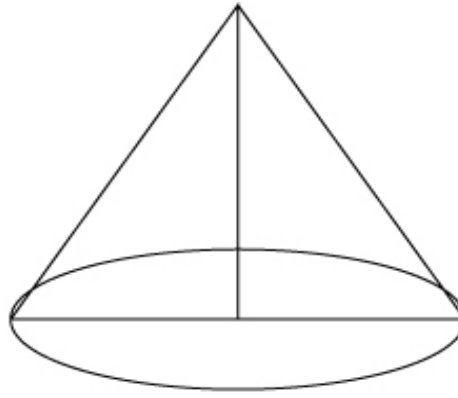
48. $(\$25)(6) + (42.95)(30) = \1438.50

49. $A = \frac{bh}{2}$
 $= \frac{144(\sqrt{151^2 - 144^2})}{2}$
 $= 3270$

50. $\cos \theta = \frac{\text{Adjacent}}{\text{Hypotenuse}}$
 $\frac{\cos \theta}{1} = \frac{x}{591}$
 $x = (\cos 29^\circ)(591)$
 $x = 517$



$$V = \frac{Bh}{3}$$



$$V = \frac{Bh}{3}$$

Since the h and 3 are the same in both equations, they can both be eliminated.

Calculator Test 5
2010 - 2011

$$B_{\text{Square Pyramid}} = B_{\text{Cone}}$$

$$s^2 = \pi r^2$$

$$22.1^2 = \pi r^2$$

$$r^2 = \frac{22.1^2}{\pi}$$

$$r = \sqrt{\frac{22.1^2}{\pi}}$$

$$r = 12.5$$

60. Given 2 points, (x_1, y_1) and (x_2, y_2) , the distance between these points is:

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

$$d = \sqrt{(22 - 4)^2 + (-13 - 5)^2}$$

$$d = \sqrt{(26)^2 + (-18)^2}$$

$$d = 31.6$$

61. $TSA = LA + \pi r^2$

$$= \pi r l + \pi r^2$$

$$= [(\pi)(15.2)(33.5)] + [(\pi)(15.2)^2]$$

$$= 2330$$

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

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

$$V = e^3$$

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

$$= \left(\frac{.0405}{\sqrt{3}}\right)^3$$

$$= 1.28 \times 10^{-5}$$

71. $Odds(\text{drawing face card, J, Q, K}) = \frac{12}{40} = .300$

$$\text{Probability}(\text{drawing face card, J, Q, K}) = \frac{12}{52} = .231$$

Calculator Test 5
2010 - 2011

72. $I = prt$
 $= (\$3000)(.08)$
 $= \$240$

$$I = prt$$
$$p = \frac{I}{rt}$$
$$p = \frac{\$240}{.035}$$
$$p = \$6857.14$$

73. Area of the annulus = $A_{\text{Large Circle}} - A_{\text{Small Circle}}$
 $= \pi R^2 - \pi r^2$
 $= \pi [R^2 - r^2]$
 $= \pi [(2106 + 983)^2 - (2106)^2]$
 $= 1.60 \times 10^7$

74. $SA = 4\pi r^2$
 $= 4\pi (5.612)^2$
 $= 396$