

Calculator Test 7  
2010 - 2011

11.  $d = rt$   
 $= \left( \frac{72.8 \text{ miles}}{1 \text{ hour}} \right) \left( 3 \frac{22}{60} \right)$   
 $= 245$

12.  $P_{\text{Square}} = P_{\text{Heptagon}}$   
 $4s = 7s$   
 $4s = (7)(22.3)$   
 $s = \frac{(7)(22.3)}{4}$   
 $s = 39.0$

13. Mean is the average of a set of data

$$\frac{4! + \sqrt{44} + LN444 + \log 4444 + \frac{1}{44444}}{5} =$$
$$\frac{24 + 6.63324 + 6.09582 + 3.64777 + .0000225}{5} = 8.08$$

24. Exterior angle =  $\frac{360}{9}$   
 $= 40.0$

25. Side opposite  $60^\circ$  angle =  $\frac{s}{2}\sqrt{3}$   
 $= \frac{8.9}{2}\sqrt{3}$   
 $= 7.71$

26.  $\frac{2}{3}(3.25) = 2.17$

35. 3245925 Enter  
2000000 %CHG = -38.4

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36. 
$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$= \frac{-2 - 5}{5 - -2}$$

$$= \frac{-7}{7}$$

$$= -\frac{7}{7}$$

Slope of line perpendicular to this line has opposite sign and its reciprocal

$$m = \frac{7}{7} = 1.00$$

37. 
$$A = LW$$

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

$$P = 2(L + W)$$

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

$$= 2\left(.0402 + \frac{.00152}{.0402}\right)$$

$$= .156$$

38. 
$$A = \frac{C^2}{4\pi}$$

$$= \frac{(22.8)^2}{4\pi}$$

$$= 41.4$$

47.  $(-772)^{2301} = (772)^{2301}$  (ans will be negative because exponent is odd)

$$(772)^{2301} = \log(772)^{2301}$$

$$= 2301 \log 772$$

$$= 6644.40740808\dots$$

Write in the ans blank, x10<sup>6644</sup>

Hit the 10<sup>x</sup> key and write, -2.56

Ans is -2.56 x 10<sup>6644</sup>

48. 
$$\left| \frac{-5}{123} \right| \left( \frac{123}{-5} \right) = \left( \frac{5}{23} \right) \left( \frac{123}{-5} \right) = -1.00$$

49. 
$$a = \sqrt{c^2 - b^2}$$

$$= \sqrt{\left(\frac{7}{12}\right)^2 - \left(\frac{4}{11}\right)^2}$$

$$= 4.56$$

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50.

$$\sin \theta = \frac{\text{Opposite}}{\text{Hypotenuse}}$$

$$\theta = \sin^{-1} \frac{\text{Opposite}}{\text{Hypotenuse}}$$

$$\theta = \sin^{-1} \frac{3.876}{9.219}$$

$$\theta = 24.9$$


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59. Number of teeth varies inversely with rpm.

$$\frac{72 \text{ teeth}}{45 \text{ teeth}} = \frac{x}{920 \text{ rpm}}$$

$$45x = (72)(920)$$

$$x = \frac{(72)(920)}{45}$$

$$x = 1470$$

60.

$$22 - s = 13 + s$$

$$9 = 2s$$

$$s = 4.50$$


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61. SA = both ends, bottom, back, front

$$= [(.02)(.07)] + [(.02)(.08)] + [(.07)(.08)] + [(.08)(\sqrt{.02^2 + .07^2})]$$

$$= .0144$$

62.

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

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

$$s = \frac{579}{\sqrt{2}}$$

$$A = A_{\text{Square}} + A_{2 \text{ Triangles}}$$

$$= \left(\frac{579}{\sqrt{2}}\right)^2 + [(579)(791)]$$

$$= 6.26 \times 10^5$$

71.

$$1 \text{ mile}^2 = 640 \text{ acres}$$

So,

$$\frac{\$10200000}{\left(\frac{23 \text{ miles}^2}{1}\right)\left(\frac{640 \text{ acres}}{1 \text{ mile}^2}\right)} = \$692.93 / \text{acre}$$

72.

$$\text{Odds}(\text{drawing a prime out of 100 cards}) = \frac{25}{75} = .333$$

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73.  $SA = A_{\text{Pentagon}} - A_{\text{Square}}$

$$= \frac{nb^2}{4 \tan\left(\frac{\pi}{n}\right)} - s^2$$
$$= \frac{(5)(59.8)^2}{4 \tan\left(\frac{\pi}{5}\right)} - (59.8)^2$$
$$= 2580$$

74.  $TSA = B + 4 \text{ sides}$

$$= s^2 + (4) \left[ \frac{bh}{2} \right]$$
$$= .221^2 + (4) \left[ \frac{(.221)(.198)}{2} \right]$$
$$= .136$$