11. $-\sqrt{\dfrac{1}{\ln 5000}} = -.343$

12. $\dfrac{\dfrac{4509.2\ inches}{12\ inches\big/1\ ft}}{11\ sides} = 34.2$

13. $P = 2(W + L)$
$176 = 2(W + W + 8)$
$176 = 4W + 16$
$4W = 160$
$W = 40$
$L = 48$

$A = LW$
$= (48)(40)$
$= 1920$

---

24. $100\ lbs = 1600\ oz$

$\dfrac{1600}{133} = 12.0$

25. $P = 12 + \left(\dfrac{12}{35}\right)(22) + \left(\dfrac{12}{35}\right)(27)$
$= 12 + 7.54 + 9.26$
$= 28.8$

26. $(n - 2)(180) = (249 - 2)(180)$
$= 44500$

---

35. $\sqrt[8]{(-8502001)^2} = 54.0$

36. $\dfrac{\$12{,}642.17}{4896.7\ yd^2} \times 356.28\ yd^2 = \$919.83$

37.
$$\frac{C}{2} = \frac{2\pi r}{2}$$

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

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

$$r = \frac{(2)(4.557)}{2\pi}$$

$$r = \frac{4.557}{\pi}$$

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

$$= \frac{\pi\left(\frac{4.557}{\pi}\right)^2}{2}$$

$$= 3.31$$

38.
$$A = \pi r_1 r_2$$

$$= \pi\left(\frac{35.9}{2}\right)\left(\frac{13.4}{2}\right)$$

$$= 378$$

47.
$$C = 2\pi r$$

$$= 2\pi \frac{5.09}{2}$$

$$\text{Revolutions} = \frac{\text{distance}}{C}$$

$$= \frac{(354 \text{ miles})(5280 \text{ ft})}{2\pi\left(\frac{5.09}{2}\right)}$$

$$= 1.17 \times 10^5$$

48.
$$\pi^{9461} = \log \pi^{9461}$$

$$= 9461 \log \pi$$

$$= 4703.53494556...$$

Write in the answer blank, x 10^{4703}

Subtract 4703 from the display

Hit the 10^x key and write in answer blank, 3.43 x 10^{4703}

49.
$$\text{Semi} - \text{perimeter} = \frac{.009 + .00245 + \sqrt{.009^2 - .00245^2}}{2}$$

$$= .0101$$

50.
$$\cos\theta = \frac{Adjacent}{Hypotenuse}$$
$$\frac{\cos 32.7}{1} = \frac{45\pi}{x}$$
$$x = \frac{45\pi}{\cos 32.7}$$
$$x = 119$$

59.
$$\frac{(27")(2")(1")}{15.03 \text{ lbs}} = \frac{3.59 \ in^3}{1 \ lb}$$

$$(43")(1.75")(1.25") = 94.1 \ in^3$$
$$\frac{3.59 \ in^3}{1 \ lb} = \frac{94.1 \ in^3}{x \ lb}$$
$$3.59x = 94.1$$
$$x = \frac{94.1}{3.59}$$
$$x = 26.2 \ lb$$

60.
$$\frac{100 \ gold}{x \ gold} = \frac{(10 \ silver)^2}{(2 \ silver)^2}$$
$$(10)^2 x = (100)(2^2)$$
$$x = \frac{(100)(2^2)}{(10)^2}$$
$$x = 4$$

61.
$$SA = 4\pi r^2$$
$$= 4\pi\left(\frac{90.22}{2}\right)^2$$
$$= 25600$$

62.
$$V = \frac{Bh}{3}$$
$$= \frac{(2.98)^2(3.44)}{3}$$
$$= 10.2$$

71.
$$(100\ ml)(98\%) = (100\ ml + x)(72\%)$$
$$100(.98) = 100(.72) + .72x$$
$$98 = 72 + .72x$$
$$.72x = 26$$
$$x = \frac{26}{.72}$$
$$x = 36.1$$

72.
$$(x+144)+(x)+\big[(2)(x+144)+16\big] = 1000$$
$$x+144+x+2x+288+16 = 1000$$
$$4x+448 = 1000$$
$$4x = 552$$
$$x = 138$$

73. Clear Area $= A_{\text{Medium Equilateral Triangle}} - A_{\text{Small Equilateral Triangle}}$
$$= \frac{s^2\sqrt{3}}{4} - \frac{s^2\sqrt{3}}{4}$$
$$= \frac{5.86^2\sqrt{3}}{4} - \frac{3.52^2\sqrt{3}}{4}$$
$$= 9.50$$

74.
Span Formula
$$Span = (1+\sqrt{2})(Side\ of\ polygon)$$
$$= (1+\sqrt{2})(879)$$
$$= 2120$$