

Decimal Representations

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<http://daytonastate.org/problems>

It is useful to be able to recognize your calculator's decimal representations of common numbers involving square roots, fractions, and π . Try to convert these by trial and error on the calculator:

$1.57079633 \approx \underline{\hspace{2cm}}$

$0.57735027 \approx \underline{\hspace{2cm}}$

$0.52359878 \approx \underline{\hspace{2cm}}$

$1.41421356 \approx \underline{\hspace{2cm}}$

$3.14159265 \approx \underline{\hspace{2cm}}$

$0.70710678 \approx \underline{\hspace{2cm}}$

$1.73205081 \approx \underline{\hspace{2cm}}$

$1.04719755 \approx \underline{\hspace{2cm}}$

$2.71828183 \approx \underline{\hspace{2cm}}$

$0.88888889 \approx \underline{\hspace{2cm}}$

$2.82842712 \approx \underline{\hspace{2cm}}$

$6.28318531 \approx \underline{\hspace{2cm}}$

$57.29577951^\circ \approx \underline{\hspace{2cm}}$

$2.35619449 \approx \underline{\hspace{2cm}}$

$2.09439510 \approx \underline{\hspace{2cm}}$

$0.86602540 \approx \underline{\hspace{2cm}}$

$0.66666667 \approx \underline{\hspace{2cm}}$

$0.14285714 \approx \underline{\hspace{2cm}}$

$0.31830989 \approx \underline{\hspace{2cm}}$

$0.94280904 \approx \underline{\hspace{2cm}}$

$2.61799388 \approx \underline{\hspace{2cm}}$

$0.78539816 \approx \underline{\hspace{2cm}}$

$1.56250000 = \underline{\hspace{2cm}}$

$3.14285714 \approx \underline{\hspace{2cm}}$

$9.86960440 \approx \underline{\hspace{2cm}}$

$0.36787944 \approx \underline{\hspace{2cm}}$

$2.23606798 \approx \underline{\hspace{2cm}}$

$0.01745329 \approx \underline{\hspace{2cm}}$

$1.05946309 \approx \underline{\hspace{2cm}}$

$1.15572735 \approx \underline{\hspace{2cm}}$

$3.46410162 \approx \underline{\hspace{2cm}}$

$453.59237 = \underline{\hspace{2cm}}$

$31.1034768 \approx \underline{\hspace{2cm}}$

$28.3495231 \approx \underline{\hspace{2cm}}$

$101.325 \text{ kPa} = \underline{\hspace{2cm}}$

$1.609344 \approx \underline{\hspace{2cm}}$

Answers are on the back.

ANSWERS

$$1.57079633 \approx \pi / 2$$

$$0.57735027 \approx \sqrt{(3)}/3$$

$$0.52359878 \approx \pi / 6$$

$$1.41421356 \approx \sqrt{(2)}$$

$$3.14159265 \approx \pi$$

$$0.70710678 \approx \sqrt{(2)}/2$$

$$1.73205081 \approx \sqrt{(3)}$$

$$1.04719755 \approx \pi / 3$$

$$2.71828183 \approx e$$

$$0.88888889 \approx 8 / 9$$

$$2.82842712 \approx 2\sqrt{(2)}$$

$$6.28318531 \approx 2\pi$$

$$57.29577951^\circ \approx 1 \text{ radian}$$

$$2.35619449 \approx (3\pi) / 4$$

$$2.09439510 \approx (2\pi) / 3$$

$$0.86602540 \approx \sqrt{(3)}/2$$

$$0.66666667 \approx 2 / 3$$

$$0.14285714 \approx 1 / 7$$

$$0.31830989 \approx 1 / \pi$$

$$0.94280904 \approx (2\sqrt{(2)})/3$$

$$2.61799388 \approx (5\pi) / 6$$

$$0.78539816 \approx \pi / 4$$

$$1.56250000 = 25 / 16$$

$$3.14285714 \approx 22 / 7$$

$$9.86960440 \approx \pi^2$$

$$0.36787944 \approx 1 / e$$

$$2.23606798 \approx \sqrt{(5)}$$

$$0.01745329 \approx \pi / 180$$

$$1.05946309 \approx 2^{(1/12)}$$

$$1.15572735 \approx \pi / e$$

$$3.46410162 \approx 2\sqrt{(3)}$$

$$453.59237 = \text{grams in an avoirdupois pound}$$

$$31.1034768 \approx \text{grams in a troy ounce}$$

$$28.3495231 \approx \text{grams in an avoirdupois ounce}$$

$$101.325 \text{ kPa} = 1 \text{ standard atmosphere}$$

$$1.609344 \approx \text{kilometers in a mile}$$