Bellwork Alg 2B Thursday, October 26, 2017

Solve each equation. Round to the nearest hundredth where necessary.

1. $10^x = 375$

2. $4(8^x) = 200$

3. $2^x + 7 = 32$

4. $e^{5x} - 10 = 30$

5. In right $\triangle ABC$, the longest side AB, is 4 feet long, and $\angle's\ BAC$ & ABC are equal. What is the perimeter of this triangle in feet?

A. 8 B. $4\sqrt{2}$ C. $4 + 4\sqrt{2}$ D. 12 E. $8 + 4\sqrt{2}$

Bellwork Alg 2B Thursday, October 26, 2017 Answers

Solve each equation. Round to the nearest hundredth where necessary.

1. $10^x = 375$

$\log 375 = x$

$x = 2.57$

2. $\frac{4(8^x)}{4} = \frac{200}{4}$

$8^x = 50$

$\log_8 50 = x$

$\frac{\log 50}{\log 8} = x$

$x = 1.88$

3. $2^x + 7 = 32$

$-7 \quad -7$

$2^x = 25$

$\log_2 25 = x$

$\frac{\log 25}{\log 2} = x$

$x = 4.64$

4. $e^{5x} - 10 = 30$

$+10 \quad +10$

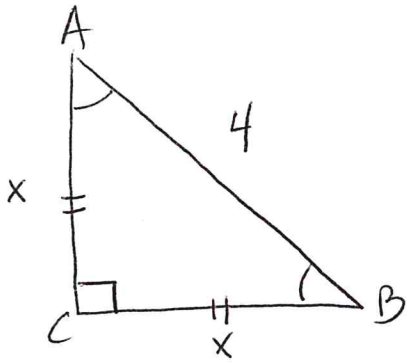
$e^{5x} = 40$

$\frac{\ln 40}{5} = \frac{5x}{5}$

$x = 0.74$

5. In right $\triangle ABC$, the longest side AB, is 4 feet long, and $\angle$'s BAC & ABC are equal. What is the perimeter of this triangle in feet?

A. 8 B. $4\sqrt{2}$ C. $4 + 4\sqrt{2}$ D. 12 E. $8 + 4\sqrt{2}$



$4^2 = x^2 + x^2$

$16 = 2x2$

$\sqrt{8} = \sqrt{x^2}$

$x = 2\sqrt{2}$

perimeter $= 2\sqrt{2} + 2\sqrt{2} + 4$

$= 4 + 4\sqrt{2}$