

## Math 331 – Worksheet 1 – Problems Ch.1

Name:	ID:	Time start: Time end:
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Problems section 1.10	Ans.	Status
1. [prob2(a)] Calculate $\frac{16.5^2(8.4-\sqrt{70})}{4.3^2-17.3}$	7.6412	<input type="checkbox"/> correct <input type="checkbox"/> not correct
2. [prob4(a)] Calculate $\frac{2.3^2 \cdot 1.7}{\sqrt{(1-0.8^2)^2 + (2-\sqrt{0.87})^2}}$	7.9842	<input type="checkbox"/> correct <input type="checkbox"/> not correct
3. [prob4(b)] Calculate $2.34 + \frac{1}{2} \cdot 2.7(5.9^2 - 2.4^2) + 9.8 \ln 51$	80.0894	<input type="checkbox"/> correct <input type="checkbox"/> not correct
4. Calculate $\sin(90^\circ) + \cos(2\pi)$	2	<input type="checkbox"/> correct <input type="checkbox"/> not correct
5. [prob8(b)] Define the variables $x$ and $y$ as $x = 8.3$ and $y = 2.4$ , then evaluate: $\sqrt{xy} - \sqrt{x+y} + \left(\frac{x-y}{x-2y}\right)^2 - \sqrt{\frac{x}{y}}$	2.1741	<input type="checkbox"/> correct <input type="checkbox"/> not correct
6. [prob20] The distance $d$ from a point $(x_0, y_0, z_0)$ to a plane $Ax + By + Cz + D = 0$ is given by: $d = \frac{ Ax_0 + By_0 + Cz_0 + D }{\sqrt{A^2 + B^2 + C^2}}$ Determine the distance of the point $(8, 3, -10)$ from the plane $2x + 23y + 13z - 24 = 0$ .	2.6042	<input type="checkbox"/> correct <input type="checkbox"/> not correct
7. [prob22] Oranges are packed such that 52 are placed in each box. Determine how many boxes are needed to pack 4000 oranges. Use MATLAB built-in function <code>ceil</code> .	77	<input type="checkbox"/> correct <input type="checkbox"/> not correct
8. [prob24(a)] The prices of an oak tree and a pine tree are \$54.95 and \$39.95, respectively. Assign the prices to variables named oak and pine, change the display format to <code>bank</code> , and calculate the total cost of 16 oak trees and 20 pine trees by typing one command.	\$1678.20	<input type="checkbox"/> correct <input type="checkbox"/> not correct
9. [prob26] The number of combinations $C_{n,r}$ of taking $r$ objects out of $n$ objects is given by: $C_{n,r} = \frac{n!}{r!(n-r)!}$ A deck of cards has 52 different cards. Determine how many different combinations are possible for selecting 5 cards from the deck.	2598960	<input type="checkbox"/> correct <input type="checkbox"/> not correct
10. [prob36(a)] Sound level $L_p$ in units of decibels (dB) is determined by: $L_p = 20 \log_{10} \left( \frac{p}{p_0} \right)$ where $p$ is the sound pressure of the sound, and $p_0 = 20 \times 10^{-6}$ Pa is a reference sound pressure (the sound pressure when $L_p = 0$ dB). Now the sound pressure of a passing car is $80 \times 10^{-2}$ Pa. Determine its sound level in decibels	92.0412	<input type="checkbox"/> correct <input type="checkbox"/> not correct