

Unit 06-07 - Literal Equations and Situations**Multiple Choice**

Identify the choice that best completes the statement or answers the question.

_____ 1. Which equation shows $w + ax = 3$ solved for w ?

a. $w = ax - 3$

c. $w = 3 - ax$

b. $w = ax + 3$

d. $w = 3 + ax$

_____ 2. Which equation shows $4n = 2(t - 3)$ solved for t ?

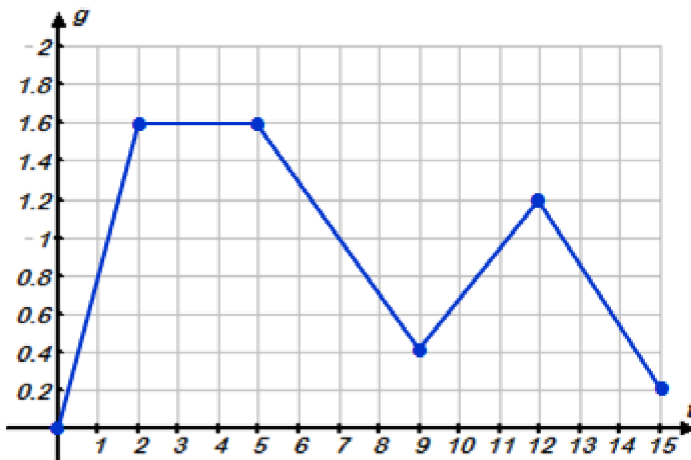
a. $t = \frac{4n - 2}{3}$

c. $t = 2n - 3$

b. $t = \frac{4n + 2}{3}$

d. $t = 2n + 3$

_____ 3. The graph below shows the level of water in gallons, g , inside a washing machine during a 15 minute wash cycle as a function of time, t , in minutes after the machine is started.



Which of the below describes the interval over which the water in the washing machine is **constant**?

a. $(2, 5)$

c. $(0, 2) \cup (9, 12)$


b. (1.6)

d. $(0, 1.6) \cup (0.4, 1.2)$

- _____ 4. Jake was rewriting the equation for the Surface Area of a cylinder so that it was solved for 'h'

$$A = \cancel{2\pi r^2} + 2\pi r h$$

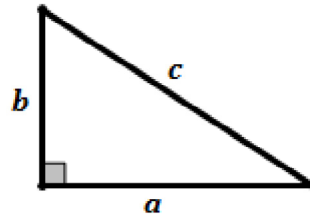
$$\frac{A - \cancel{2\pi r^2}}{\cancel{2\pi r}} = \frac{\cancel{2\pi r^2} + 2\pi r h}{\cancel{2\pi r}}$$

$$A + r = h$$


His friend Niki noticed that he made an error and explained it to Jake. What error did Niki point out to Jake if she was correct that he did make a mistake?

- On the first step, Jake should have added $2\pi^2$ to both sides instead of subtracting.
 - On the last step, Jake can't divide both sides by $2\pi r$ all at the same time.
 - On the last step, Jake didn't simplify the left side correctly.
 - Niki is wrong. Jake did it correctly.
- _____ 5.

Three of the equations below show the same relationship between the length of a leg of a right triangle (a), the length of the other leg of a right triangle (b), and the length of the hypotenuse (c). Which is the only equation that shows a **different** and incorrect relationship?



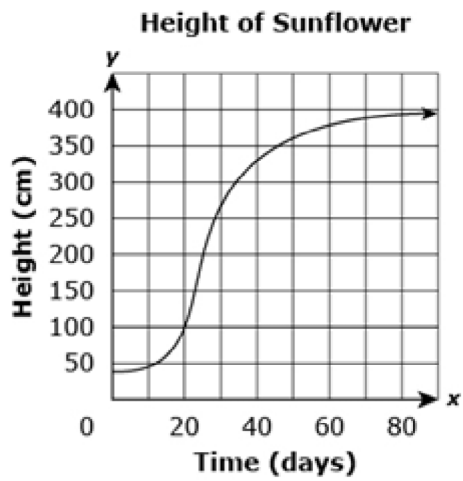
(you may assume that all variables represent positive numbers)

- | | |
|----------------------|---------------------------|
| a. $a^2 + b^2 = c^2$ | c. $b = \sqrt{a^2 + c^2}$ |
| b. $b^2 = c^2 - a^2$ | d. $a = \sqrt{c^2 - b^2}$ |

Name: _____

ID: A

____ 6. The graph shows the height of a sunflower over a period of time.



Over which interval below did the sunflower grow the fastest?

- | | |
|-----------------------|-----------------------|
| a. 0 days to 20 days | c. 40 days to 60 days |
| b. 20 days to 40 days | d. 60 days to 80 days |