Check Your Understanding – Solving Equations

The table below identifies the key concepts from this unit.
1. Check your understanding by completing these questions.
2. Check your answers in the key provided.
3. In the table below, highlight the questions you got correct.
4. Ask peers/Dr. James about concepts where you can improve.

Key Concepts	Mild	Medium	Spicy
Solving Equations	1, 2, 3, 4, 5	6, 7, 8, 9, 10	11, 12, 13, 14
Solving Equations – Word Problems		15, 16	17, 18

1) Solve the following equation:

$$x + 9 = 20$$

2) Solve the following equation:

$$x - 8 = 10$$

3) Solve the following equation:

$$5x + 3 = 18$$

4) Solve the following equation:

$$-4 - 3x = 11$$

5) Solve the following equation:

$$1.5x - 0.2 = 0.8$$

6) Solve the following equation:

$$2x + 3 = 3x - 4$$

7) Solve the following equation

$$(x - 1) + 2(x - 3) = x + 5$$

8) Solve the following equation

$$3(4x + 1) = 2(3x - 1)$$

9) Solve the following equation

$$(2x - 1) - (3x + 2) = 4x - 3$$

10) Solve the following equation

$$3 - 6(x - 1) + 4(3x - 2) = 2x + 3$$

11) Solve the following equation

$$\frac{2x - 3}{4} = 3x$$

12) Solve the following equation

$$\frac{2x + 1}{4} = \frac{6x - 2}{2}$$

13) Solve the following equation

$$\frac{x - 1}{2} = \frac{x + 1}{3}$$

14) Solve the following equation

$$\frac{2x + 1}{3} = \frac{x - 1}{4}$$

15) Johnny buys 8 oranges and gets 20 cents back in change from a $5 bill. What is the price of one orange?

16) In Term 1, Julian had a test average of 78. If Julian earned a 70 on the first test and an 80 on the second test, what must the third test mark be?

17) J'von earns a weekly base salary of $175. He also earns a commission of $50 for each computer he sells. How many computers must J'von sell in a week to earn a total salary of $475?

18 In class of 30 students everyone has on either a blue shirt or a green shirt. There are 6 more students with green shirts than blue shirts. How many students are wearing green shirts?

Answers

1) $x = 11$

2) $x = 18$

3) $x = 3$

4) $x = -5$

5) $x = \frac{2}{3}$ or 0.67

6) $x = 7$

7) $x = 6$

8) $x = -\frac{5}{6}$ or -0.83

9) $x = 0$

10) $x = \frac{1}{2}$ or 0.5

11) $x = -\frac{3}{10}$ or -0.3

12) $x = \frac{1}{2}$ or 0.5

13) $x = 5$

14) $x = -\frac{7}{5}$ or -1.4

15) Each orange costs $0.60

16) Julian must have earned an 84 on Test 3

17) J'von must sell 6 computers

18) There are 18 students wearing green shirts