



Rosary School \ Marj Elhamam

Name : _____

Date : / 9 / 2025

Subject: Practice Worksheet (3) /unit (2)

Grade : 7 ()

Equations and formulae

❖ 2.1 Solving One-Step Equations

Q1: Solve each equation. Show your working.

$$a) x - 8 = 15$$

$$b) y + 6 = 20$$

$$c) 7t = 49$$

$$d) \frac{m}{4} = 9$$

$$e) a - 12 = 5$$

Q2: Substitute the values given into each formula.

Solve the equation to find the value of the unknown

$$a) t = k - 6 \quad \text{Find } k \text{ when } t = 48$$

b) $s = 8 + n$ Find n when $s = 50$

c) $y = kx$ Find k when $y = 72$ and $x = 8$

d) $T = \frac{P}{4}$ Find P when $T = 16$

❖ **2.2 Solving Two-Step Equations**

Q3: Solve each equation step by step.

a) $3x + 5 = 20$

b) $2y - 7 = 9$

c) $\frac{n}{3} + 4 = 10$

d) $9p - 6 = 30$

$$e) 4q + 2 = 18$$

❖ 2.3 More Complex Equations

Q4: Solve the following.

$$a) 5(x - 1) = 20$$

$$b) 3y + 4 = 2y + 10$$

$$c) 2(m + 6) = m + 14$$

$$d) 8a - 3 = 2a + 15$$

$$e) \frac{(3x + 7)}{2} = 10$$

❖ 2.4 Working with Formulae

Q5:

a) The area of a rectangle is given by $A = lw$.

If the area is 84 cm^2 and the length is 12 cm , find the width.

b) The formula for speed is $s = \frac{d}{t}$.

A train travels 300 km in 5 hours . What is its average speed?

c) The perimeter of a rectangle is given by $P = 2l + 2w$.

If the perimeter is 64 m and the length is 18 m , find the width.

Q6: Write a formula for converting.

a) Minutes to seconds

b) days to years

c) years to weeks

Challenge Question:

$$\text{Solve: } \frac{3(x-2)}{3} = 2x + 2.$$



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