Rosary School \ Marj Elhamam

Name : _____

Date :   / 9   / 2025

Subject: Worksheet (2) /unit (2)

Grade : 7 (   )

Equations and formulae

❖ 2.1 Solving One-Step Equations

Q1: Solve each equation. Show your working.

a) $x + 7 = 12$

b) $y - 9 = 4$

c) $5z = 25$

d) $\dfrac{m}{6} = 3$

e) $a + 13 = 20$

f) $-x = -9$

❖ 2.2 Solving Two-Step Equations

Q2: Solve each equation step by step.

a) $2x + 3 = 11$

b) $4(x - 2) = 12$

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c) $\dfrac{n}{5} + 2 = 6$

d) $7p - 5 = 23$

e) $3q + 4 = 19$

❖ **2.3 More Complex Equations**

Q3: Solve the following.

a) $y - 4 = 3y + 2$

b) $2y + 3 = 5y - 6$

c) $3(m + 4) = 2m + 18$

d) $6a - 2 = 3a + 7$

e) $\dfrac{(2x + 5)}{3} = 7$

❖ **2.4 Working with Formulae**

Q4: Substitute the values given into each formula.

Solve the equation to find the value of the unknown.

a) $t = k - 6$ Find k when $t = 16$

b) $s = 8 + n$ Find n when $s = 22$

c) $y = kx$ Find k when $y = 64$ and $x = 8$

$d)\ T = \dfrac{P}{4}$ Find P when $T = 32$

Q5:

a) The area of a rectangle is given by $A = lw$.
If the area is 60 cm² and the length is 12 cm, find the width.

b) The formula for speed is $S = \dfrac{d}{t}$.
A car travels 180 km in 3 hours. What is its average speed?

c) The perimeter of a rectangle is given by $P = 2l + 2w$.
   If the perimeter is 50 m and the length is 15 m, find the width.

Q6: Write a formula for converting.

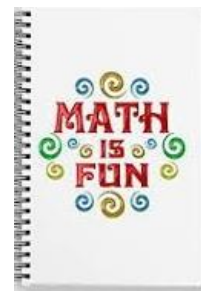   a) m to km   b) weeks to years

   c) minutes to hours   d) days to hours

   e) days to weeks

   ✚ Challenge Question:

Solve: $5(x - 2) + 3 = 2x + 10$.

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