

Sangam .S.K.M College- Nadi

Year 11 Life Skills -Mathematics

Worksheet 2 – Solutions

1i)	Time and half rate = $1.5 \times 14.80 = \mathbf{\$22.20}$
ii)	Double time rate = $2 \times 14.80 = \mathbf{\$29.6}$
iii)	Total wages = $24 \times 14.80 + 4 \times 22.20 + 8 \times 29.6 = \mathbf{\$680.80}$
2. i)	Self-employed - carpenter, mechanic, hair dresser, market vendor
ii)	Volunteer – NGO's, Red Cross workers
iii)	Part-time – tutor
iv)	Piece-workers – garment factory workers
3.	$\%profit = \frac{\text{profit amount}}{\text{original price}} \times 100$ $= \frac{16}{56} \times 100 = \mathbf{28.57\%}$
4.	<p>Compound interest = $P(1 + \frac{r}{100})^t$</p> $7524.56 = 6500(1 + \frac{5}{100})^t$ <p style="text-align: center;"><u>t = 3years</u></p>
5.	<p>Simple interest = $\frac{P \times R \times T}{100} = \frac{72200 \times 7.5 \times 4}{100} = \mathbf{\\$21,660}$</p>
6.	<p>Original price = $\frac{\text{selling price}}{100\% + \%profit} = \frac{6000}{1.12} = \mathbf{\\$5357.14}$</p>
7.	<p>Original price = $\frac{\text{selling price}}{100\% - \%loss} = \frac{46200}{0.9} = \mathbf{\\$51,333.33}$</p>

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Year 11 Applied Mathematics

Worksheet 2 – Solutions

1.	$6m^2 + 2mn - n^2 - 3mn$ $= 2m(3m+n) - n(n+3m)$ $= \underline{(2m-n)(3m+n)}$ ----- use factorizing by grouping method
2.	$(y-4)(y+3) = y^2 + 3y - 4y - 12$ $= \underline{y^2 - y - 12}$
3.	$ 2x+4 =8$ -it will have 2 solutions $2x+4=8 \qquad \qquad \qquad 2x+4=-8$ $\underline{x=2} \qquad \qquad \qquad \underline{x=-6}$
4.	$3x+10 \geq -5$ $3x+10 \geq -5 -10$ $3x \geq -15 \div 3$ $\underline{x \geq -5}$
5.	$\frac{x+1}{3} = \frac{2x+6}{8}$ ----- cross multiply $8(x+1) = 3(2x+6)$ $8x+8 = 6x+18$ $\underline{x=5}$
6.	$3(2x+3)(x-1) + 4x(5-x)$ $= 6x^2 - 6x + 9x - 9 + 20x - 4x^2$ $= 2x^2 + 23x - 9$
7.	Area of shaded region= $(20 \times 36) - (0.5 \times 18 \times 4)$ $= 720 - 36 = \mathbf{684cm^2}$