



Rosary School – Marj Elhamam

Mathematics

Answer key for booklet 1(chapter 1)

Name:

Date: / /2025

Class: grade 9

1	work	20	work
2	Work	21	2
3	work	22	work
4 (a)	Line between -2 and 1	23	work
(b)	-3,-2,-1,0,1,2	24 (a)	0.00078
5 (a)	-2,-1,0,1,2	24(b)	2.25×10^7
(b)	An arrow from 1 towards the left	25(a)	2.84×10^9
6	work	(b)	0.00025
7 (a)	84,105,171,233,490	26 (a)	1
(b)	5102	(b)	6×10^{125}
(c)	30	27(a)	pacific
(d)	700	(b)	9.393×10^4
8	27	28	1.26×10^{122}
9	work	29(a)	50 000
10 (a)	-3,-2,-1,0,1	(b)	6×10^{-5}
(b)	An arrow from -1 towards the right	(c)	2.5×10^{-188}
11	work	30	2.16×10^{122}
12	work	31	887
13	work	32(a)	0.0057
14	work	(b)	8×10^5
15	work	(c)	4.55×10^6
16	work	33(a)	2 460 000
17	work	(b)	7.4×10^{-4}
18	6090	(c)	5.83×10^6
19	work		

34(a)	5.8×10^7	47(a)	2.745
(b)	11	(b)	2.755
35(a)	8.9×10^{-5}	(c)	answer is not sensible as 1200 is very far from 13332.29917
(b)	83400	48	2738.4
36(a)	0.0056	49	59.6375
(b)	2×10^7	50(a)	33.75
37(a)	8 800 000	(b)	33.85
(b)	Lagos	51	His answer is sensible as it is close to estimated 12000
(c)	7.70×10^6	52	1.56
38(a)	7.6×10^7	53	7.79
(b)	0.00054	54	Work that shows that Kaidan is correct
39(a)	35 000 000	55	58.95
(b)	7.6×10^6	56	9.56
40 (a)	604 000	57	0.765
(b)	7×10^{-5}	58	30.2
(c)	2×10^5	59	167
41 (a)	7.3×10^{-2}	60	12.8
(b)	4×10^{28}	61(a)	1.45
42(a)	0.000 587	(b)	1.35
(b)	8.4×10^7	62(a)	17.5
(c)	57.8	(b)	18.5
43(a)	0.000084	63	work
(b)	5.2×10^{146}	64	work
44(a)	4.35	65	work
(b)	4.25	66	work
(c)	8.15	67	work
45	3.22	68	work
46	2.6	69	$\frac{2x - 2}{45}$
		70	work

71	420	96(a)	Not correct/show work
72(a)	5^{19}	(b)	168
(b)	$2^5 \times 5^2$	97	180
73(a)	$2^6 \times 3^1 \times 11^4$	98	Work that leads to the decision that she should buy from arctic oil
(b)	$2^9 \times 3^5 \times 11^8$	99	Question is cancelled
74	$2^4 \times 3^2 \times 5^4 \times 11 \times 13$	100	686
75(a)	$2^3 \times 3^2 \times 5$ or 360	101	10628
(b)	$5^2 \times 7^4 \times 11$	102	6174
76(a)	$2^2 \times 5$ or 20	103(a)	44349
(b)	$2^4 \times 3^2 \times 5^3 \times 7^3 \times 11$	(b)	32600
77(a)	2×3^{37}	104	127.5
(b)	$2^5 \times 3^{80}$	105	1 000 000
78	$2^4 \times 5 \times 11$ with work	106	53687
79	$2^3 \times 3 \times 5^2$	107	64.5
80(a)	$2^2 \times 7$ or 28	108(a)	11.8
(b)	$2^3 \times 3^2 \times 5$ or 360	(b)	484
81(a)	$3^2 \times 5 \times 7$ or 315	109	$\frac{12}{25}$
(b)	$3^{11} \times 5^7 \times 7^5$	110	10
82	$2^4 \times 3 \times 5^2$	111	1.5
83(a)	$2^2 \times 3 \times 5^2$	112	86.3
(b)	$2^3 \times 3^3 \times 5^2 \times 7$	113(a)	1.5
84	$2^2 \times 3^2$ or 36	(b)	215 000
85(a)	$2^4 \times 5^2 \times 7^2$	114	P=30
(b)	$2^{16} \times 5^8 \times 7^{12}$	115	He should use B difference is \$12
86	$2^3 \times 5^2 \times 7$	116	7754
87	$2^2 \times 3^2 \times 10^2$	117	8
88	$5^3 \times 7^2 \times 11^4$	118	550
89	$2^2 \times 5^2 \times 7$	119(a)	1:4
90	441	(b)	$\frac{3}{10}$
91	44.2%	(c)	75
92	2.1	120(a)	2030
93	13.50	(b)	95

94	24	121(a)	590
95	3.24×10^7	(b)	250
122(a)	2250	151	$2 \times 3^2 \times 5^3$
(b)	1500	152	477 030
123	16.28	153	13
124	25	154	602
125	1512	155	20
126	78.3	156	156
127	152.40	157(a)	22.5
128	690	(b)	24 500
129(a)	2250	158	2.5
(b)	1500	159	820
130	22	160	5740
131	8.50	161	7872
132(a)	3 255 200	162	3.6w
(b)	460 594	163	342
133	13	164	495
134	1350	165	7500
135	70	166	24 900 000 or 24.9 million
136	10.4	167	40
137	$X = 1.75$	168	79
138(a)	No, same band as work shows that price was 610 000 which is in the same band	169	41.6
(b)	22.5	170	216
139	926	171	20869
140	2320	172	A=76 B= 82 B gives more
141	87.5	173	2100
142	7.9	174	22174
143	9396	175(a)	Show work
144	737	(b)	$\frac{6 + 3\sqrt{y}}{4 - y}$
145(a)	10.2	176	$3\sqrt{7} - 3$
(b)	45	177	X=19 y=3
146	$\frac{23}{75}$	178(a)	Show work
147	52651	(b)	$\frac{2 + \sqrt{2}}{3}$

148	16.25	179	$-6 + \sqrt{48}$
149	32		
180(a)	K=12	185	$2 + \sqrt{5}$
(b)	$1 - 2\sqrt{2}$	186	$\sqrt{20} + 2$
181	$9 + 3\sqrt{7}$	187(a)	Show work
182	Show work	(b)	n =135
183	$17 + \sqrt{288}$	188(a)	$5\sqrt{27}$ n=5
184	$3 + \sqrt{3}$	(b)	$3 + 4\sqrt{2}$