

Year 9 NAPLAN Numeracy Practice Test Solutions (Non-Calculator)

About this resource:

Year 9 NAPLAN Numeracy Practice Test – Non-Calculator. 32 questions, 40 minutes. This practice test follows the structure, question types and difficulty of the official NAPLAN Year 9 numeracy (non-calculator) papers. A calculator may not be used. This document contains the answer and a full worked solution for every question.

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Ayman graduated VCE in 2021 with an ATAR of 98.10, achieving a 45 raw score in General Mathematics and 40+ raw all around. He is currently pursuing Dentistry at La Trobe University and **has been tutoring for 8+ years**. He is known for his kind and patient nature and ability to create a learning environment where students feel confident to ask questions and improve.

Q	Answer	How to work it out
1	B (\$0.27)	$\$2.16 \div 8 = \$0.27$ for each sticker.
2	C (4700)	1 metre = 1000 millimetres, so $4.7 \times 1000 = 4700$ mm.
3	C (9:40 pm)	145 minutes = 2 hours 25 minutes. 7:15 pm + 2 hours = 9:15 pm, and 9:15 pm + 25 minutes = 9:40 pm.
4	B (28.37)	The digit in the third decimal place is 5, so the second decimal place rounds up from 6 to 7, giving 28.37.
5	D (225)	The difference is $180 - (-45) = 180 + 45 = 225$ points.
6	B $((26 \times 18) + 45)$	Each of the 26 people costs \$18, giving 26×18 . The \$45 for the cake is paid once, so it is added on afterwards.
7	C (22)	The pattern starts at 4 sticks and adds 3 for each new step, so the number of sticks is $3n + 1$. For Step 7 that gives $3 \times 7 + 1 = 22$ sticks.
8	C $(4 \times c \times c \times c)$	The index 3 applies only to the c, so $c^3 = c \times c \times c$. The 4 multiplies that result once.
9	B (6/7)	$5/6 \approx 0.833$. Comparing the options: $4/5 = 0.8$, $6/7 \approx 0.857$, $7/9 \approx 0.778$ and $9/11 \approx 0.818$. Only 6/7 is greater than 5/6.

Q	Answer	How to work it out
10	C (80%)	12 of the 15 blocks are marked as sold, and $12/15 = 4/5 = 80\%$.
11	A (5 : 7)	Non-fiction books = $1200 - 500 = 700$. The ratio is 500 : 700, which simplifies to 5 : 7.
12	126	Multiply both numbers by 100 so the divisor is a whole number: $1512 \div 12 = 126$.
13	B (\$310 000)	Ordered from lowest to highest: \$290 000, \$290 000, \$310 000, \$450 000, \$520 000. The median is the middle (third) value, \$310 000.
14	8000	50 cm = 0.5 m, so the volume of water is $4 \times 4 \times 0.5 = 8 \text{ m}^3$. Since 1 m^3 holds 1000 litres, that is $8 \times 1000 = 8000$ litres.
15	B (output = input $\times 3 + 1$)	Test the rule on every pair: $2 \times 3 + 1 = 7 \checkmark$, $3 \times 3 + 1 = 10 \checkmark$ and $5 \times 3 + 1 = 16 \checkmark$. Only this rule works for all three.
16	D ((8, 5))	The side from (1, 2) to (3, 5) is a step of 2 across and 3 up. Applying the same step to (6, 2) gives (8, 5), so opposite sides are parallel and equal in length.
17	C ($9y + 4$)	Collect the like terms: $7y + 2y = 9y$, and $-5 + 9 = +4$. So the expression simplifies to $9y + 4$.
18	B (2.1 litres)	Each hen drinks $2.4 \div 8 = 0.3$ litres per day, and over a week that is $0.3 \times 7 = 2.1$ litres.
19	16	$80 \text{ photos} \times 12 \text{ seconds} = 960 \text{ seconds}$ in total, and $960 \div 60 = 16$ minutes.
20	B (12)	Subtract the indices for each base: $2^5 \div 2^3 = 2^2 = 4$, $3^2 \div 3 = 3$ and $7 \div 7 = 1$. So the result is $4 \times 3 = 12$.
21	C (5)	There are 16 equally likely pairs. Four of them give a total of 5 (1+4, 4+1, 2+3 and 3+2), which is more than for any other total.
22	B (4.2×10^{-4})	To make 4.2 the decimal point moves 4 places to the right, so the power of ten is -4 : $0.00042 = 4.2 \times 10^{-4}$.
23	\$27	If half of Caleb's equals a third of Ellie's, then Caleb has 2 parts and Ellie has 3 parts. Together that is 5 parts = \$45, so one part is \$9 and Ellie has $3 \times \$9 = \$27$.
24	B (Triangle ABC is an isosceles triangle.)	The third angle is $180^\circ - 70^\circ - 40^\circ = 70^\circ$. Two equal angles mean two equal sides, so the triangle is isosceles.
25	B (Ana walked to the park, rested for a while and then ran home.)	The graph rises gently (walking out), then stays flat (resting), then falls steeply. A steeper fall means a faster return, so Ana ran home.
26	C (0.40)	Only the 60 Year 9 students matter, and 24 of them walk. $24 \div 60 = 0.40$.

Q	Answer	How to work it out
27	6	Priya starts \$60 behind but gains $\$25 - \$15 = \$10$ on Dylan each week. $\$60 \div \$10 = 6$ weeks. Check: $240 + 15 \times 6 = \$330$ and $180 + 25 \times 6 = \$330$.
28	30	The rectangle is $6 \times 4 = 24 \text{ m}^2$ and the triangle is $\frac{1}{2} \times 4 \times 3 = 6 \text{ m}^2$. The total area is $24 + 6 = 30 \text{ m}^2$.
29	10.5	The first increase was $2.5 - (-1.5) = 4^\circ\text{C}$. Double that is 8°C , so the third measurement is $2.5 + 8 = 10.5^\circ\text{C}$.
30	80	Total distance = $2 \times 180 = 360 \text{ km}$. Total time = $2 \text{ h} + 2.5 \text{ h} = 4.5 \text{ h}$. Average speed = $360 \div 4.5 = 80 \text{ km/h}$.
31	8.4	Two sides are not labelled, so work them out first. The bottom is 800 m and the top is 500 m, so the unlabelled horizontal side is $800 - 500 = 300 \text{ m}$. The right side is 400 m and the step is 200 m, so the unlabelled left side is $400 + 200 = 600 \text{ m}$. Perimeter = $500 + 200 + 300 + 400 + 800 + 600 = 2800 \text{ metres}$. With 3 strands, $3 \times 2800 = 8400 \text{ metres} = 8.4 \text{ kilometres}$.
32	600	By road she walks $900 + 1200 = 2100 \text{ m}$. Across the block the distance is $\sqrt{(900^2 + 1200^2)} = \sqrt{2\,250\,000} = 1500 \text{ m}$. The saving is $2100 - 1500 = 600 \text{ m}$.