PrepKit

WA GATE (ASET) practice: Quantitative Reasoning

20 free practice questions with worked answers at the back.

Name _____ Date _____ **Score** **/ 20**

For the grown-up

- Print single-sided, so the answer sheet does not print on the back of the answers.
- Give your child pages 1 to 7, and keep pages 8 to 9 back. They have the answers.
- All your child needs is a pencil and some spare paper. The questions can be done without a calculator.
- To time it, allow 20 minutes. Later questions are usually harder.
- Mark it together. For any answer that was wrong, read the working and try the question again.

About this sheet. PrepKit wrote these questions. This is not a past paper, and it does not come from the WA Department of Education. It is shorter than the ASET's Quantitative Reasoning test, and a score here does not predict a result.

About the ASET. It is a paper and pencil test, sat at an assigned testing centre. Its Quantitative Reasoning test has 35 multiple-choice questions in 35 minutes. For the 2028 intake, Year 6 students in Perth metro, Bunbury and Albany sit the test on Saturday 6 March 2027. Dates can change, so check them at education.wa.edu.au/key-dates-and-application-guidelines. Source: WA Department of Education.

1 Ella is thinking of one of the numbers on this list: 6, 8, 28, 35.

- Her number is a multiple of 7.
- Her number is even.

Which number is Ella thinking of?

(A) 28 (B) 35

(C) 8 (D) 6

2 A primary school has 400 students. 50% of the students are girls. Of the girls, 20% play soccer for the school team. How many girls play soccer for the school team?

- (A) 80
- (B) 40
- (C) 100
- (D) 20

3 A kangaroo hops at a steady speed of 12 metres per second. How far does the kangaroo travel in 45 seconds?

- (A) 600 m
- (B) 450 m
- (C) 540 m
- (D) 480 m

4 A documentary about Australian wildlife starts at 18:50 (24-hour time) and runs for 1 hour and 25 minutes. What time will the documentary finish in 12-hour format?

- (A) 7:15 PM
- (B) 8:25 PM
- (C) 8:05 PM
- (D) 8:15 PM
- (E) 7:25 PM

5 A large water cooler bottle holds 18 litres of water. How many 400 mL glasses can be completely filled from the bottle?

- (A) 45 glasses
- (B) 7200 glasses
- (C) 40 glasses
- (D) 4 glasses
- (E) 450 glasses

6 A ranger recorded the number of visitors to a lookout in Kings Park each afternoon:

Day	Visitors
Monday	24
Tuesday	33
Wednesday	45
Thursday	38

What is the mean number of visitors per afternoon?

(A) 45 visitors
(B) 35 visitors
(C) 21 visitors
(D) 140 visitors

7 The table below shows the number of students in each Year 6 class who chose different sports for the athletics carnival.

	Sprint	Long jump	Shot put	Relay
Class 6A	8	5	3	12
Class 6B	6	7	4	9
Class 6C	10	4	6	8

Which sport had the most students across all three classes?

(A) Relay
(B) Shot put
(C) Sprint
(D) Long jump

8 A family drove $\frac{3}{5}$ of their journey on Saturday and $\frac{1}{4}$ of their journey on Sunday. What fraction of their entire journey have they completed?

(A) $\frac{7}{10}$
(B) $\frac{1}{20}$
(C) $1\frac{1}{10}$
(D) $\frac{17}{20}$
(E) $\frac{4}{9}$

9 What is the difference between the value of the digit '6' in the number 6,123,450 and the value of the digit '6' in the number 2,367,890?

- (A) 6,000,000
- (B) 5,940,000
- (C) 5,400,000
- (D) 5,994,000
- (E) 6,060,000

10 An Australian family is travelling to Japan. The exchange rate is 1 Australian dollar = 95 Japanese yen. They exchange 800 Australian dollars.

At a shop in Tokyo, they buy a souvenir that costs 9,500 yen. How many yen do they have left?

- (A) 76,000 yen
- (B) 85,500 yen
- (C) 66,500 yen
- (D) 56,500 yen

11 A special number sequence starts with 2 and 3. Each subsequent number is found by adding the two previous numbers together. What is the 7th term in this sequence?

- (A) 42
- (B) 37
- (C) 29
- (D) 21
- (E) 34

12 Two fair dice are rolled at the same time. What is the probability that the sum of the two numbers shown is exactly 9?

- (A) $\frac{1}{9}$
- (B) $\frac{1}{6}$
- (C) $\frac{2}{9}$
- (D) $\frac{1}{12}$

13 Garden A is a square with a perimeter of 72 metres. Garden B is a rectangle with a length of 24 metres and the same perimeter as Garden A. How much greater is the width of Garden A than the width of Garden B?

(A) 12 metres
(B) 6 metres
(C) 3 metres
(D) 18 metres

14 A rectangular piece of cardboard measures 30 cm by 20 cm. A square of side 6 cm is cut from each corner. What is the area of the remaining cardboard?

(A) 420 cm²
(B) 456 cm²
(C) 516 cm²
(D) 564 cm²

15 After spending $\frac{3}{7}$ of his savings on a new cricket bat, Liam has $40 left. How much money did Liam have in his savings originally?

(A) $56
(B) $80
(C) $24
(D) $70

16 A rectangular fish tank has a length of 90 cm, a width of 50 cm, and a height of 60 cm. It is currently filled with water to a depth of 45 cm. How many more litres of water are needed to fill the tank completely?

(A) 27 L
(B) 202.5 L
(C) 135 L
(D) 67.5 L

17 The length of a piece of ribbon is x centimetres. Another piece of ribbon is 5 cm shorter than the first. A third piece is twice as long as the second piece. What is the total length of all three pieces of ribbon in centimetres?

(A) 4x - 10
(B) 3x - 10
(C) 4x - 15
(D) 2x - 10
(E) 3x - 5

18 A ribbon is $5\frac{1}{5}$ metres long. Sophie needs to cut it into pieces that are each $\frac{3}{10}$ metre long for a craft project. After cutting as many complete pieces as possible, what length of ribbon will be left over?

(A) $\frac{1}{5}$ metre
(B) $\frac{1}{10}$ metre
(C) $\frac{3}{10}$ metre
(D) No ribbon is left over

19 Three friends, Alex, Ben, and Chloe, are comparing their savings. Alex has $200. Ben has 125% of Alex's savings. Chloe has 3/5 of Ben's savings. They decide to combine their money and buy a gift that costs $510. What percentage of their total combined savings will be left after buying the gift?

(A) 10%
(B) 12.5%
(C) 15%
(D) 20%

20 A farmer looks at a rectangular paddock that is divided into smaller rectangles by fence lines. The paddock has 3 horizontal fence lines (including the top and bottom edges) and 5 vertical fence lines (including the left and right edges).

How many rectangles of any size can be found in the paddock?

(A) 20
(B) 24
(C) 36
(D) 30

Answer sheet

Circle one letter for each question.

1	A	B	C	D		
2	A	B	C	D		
3	A	B	C	D		
4	A	B	C	D	E	
5	A	B	C	D	E	
6	A	B	C	D		
7	A	B	C	D		
8	A	B	C	D	E	
9	A	B	C	D	E	
10	A	B	C	D		
11	A	B	C	D	E	
12	A	B	C	D		
13	A	B	C	D		
14	A	B	C	D		
15	A	B	C	D		
16	A	B	C	D		
17	A	B	C	D	E	
18	A	B	C	D		
19	A	B	C	D		
20	A	B	C	D		

Stop here. The next pages have the answers.

Answers and working

1 (A) **28**

The multiples of 7 on the list are 28 and 35. 35 is odd, so the number is 28.

2 (B) **40**

50% of 400 is 200 girls. 20% of 200 is 40.

3 (C) **540 m**

Distance = speed × time. 12 × 45 = 540 metres.

4 (D) **8:15 PM**

18:50 plus 1 hour is 19:50. Another 25 minutes makes 20:15, which is 8:15 PM.

5 (A) **45 glasses**

18 litres is 18,000 mL. 18,000 ÷ 400 = 45.

6 (B) **35 visitors**

Add the counts: 24 + 33 + 45 + 38 = 140. Divide by the 4 afternoons: 140 ÷ 4 = 35.

7 (A) **Relay**

Add each column. Sprint 24, long jump 16, shot put 13, relay 29. Relay is the largest.

8 (D) $\frac{17}{20}$

Use a denominator of 20. $\frac{3}{5} = \frac{12}{20}$ and $\frac{1}{4} = \frac{5}{20}$. Together they make $\frac{17}{20}$.

9 (B) **5,940,000**

In 6,123,450 the 6 is worth 6,000,000. In 2,367,890 the 6 is worth 60,000.
6,000,000 − 60,000 = 5,940,000.

10 (C) **66,500 yen**

800 × 95 = 76,000 yen. 76,000 − 9,500 = 66,500 yen.

11 (E) **34**

Keep adding the last two numbers: 2, 3, 5, 8, 13, 21, 34. The 7th number is 34.

12 (A) $\frac{1}{9}$

Two dice give 6 × 6 = 36 results. A sum of 9 comes from 3 + 6, 4 + 5, 5 + 4 and 6 + 3, which is 4 results. $\frac{4}{36} = \frac{1}{9}$.

13 (B) **6 metres**

Garden A has sides of 72 ÷ 4 = 18 m. Garden B: half its perimeter is 36 m, so its width is 36 − 24 = 12 m. 18 − 12 = 6 m.

14 (B) **456 cm²**

The whole card is 30 × 20 = 600 cm². The four squares are 4 × 6 × 6 = 144 cm².
600 − 144 = 456 cm².

15 (D) **$70**

He spent $\frac{3}{7}$, so $40 is the other $\frac{4}{7}$. That makes $\frac{1}{7}$ worth $10, and all of his savings $7 \times \$10 = \$70$.

16 (D) **67.5 L**

The empty part is 60 − 45 = 15 cm deep. 90 × 50 × 15 = 67,500 cm³. 1,000 cm³ is 1 litre, so that is 67.5 L.

17 (C) **4x − 15**

The second piece is x − 5. The third is twice that: 2x − 10. Add all three: $x + x - 5 + 2x - 10 = 4x - 15$.

18 (B) **$\frac{1}{10}$ metre**

In tenths, the ribbon is $\frac{52}{10}$ metres and each piece is $\frac{3}{10}$. 52 ÷ 3 = 17 remainder 1, so 17 pieces leave $\frac{1}{10}$ metre.

19 (C) **15%**

Ben has 125% of $200 = $250. Chloe has $\frac{3}{5}$ of $250 = $150. The total is $600, and $600 − $510 = $90 is left. $\frac{90}{600}$ = 15%.

20 (D) **30**

A rectangle uses 2 of the 3 horizontal lines (3 ways) and 2 of the 5 vertical lines (4 + 3 + 2 + 1 = 10 ways). 3 × 10 = 30.

Keep going

This sheet covers one part of the ASET. You can try free questions from each multiple-choice section, with no account, at **prepkit.au/free-practice-test/wa-gate**.