NAPLAN NATIONAL ASSESSMENT PROGRAM Literacy and Numeracy

acara AUSTRALIAN CURRICULUM, ASSESSMENT AND REPORTING AUTHORITY

YEAR 7 2012

NUMERACY
CALCULATOR ALLOWED

SESSION 1

0:40

Time available for students to complete test: 40 minutes

Use 2B or HB pencil **only**

Do not write on this page.

PRACTICE QUESTIONS

P1 50, 100, 150, 200, 250, **?**

Which number comes next in this sequence?

251	260	300	350
⬭	⬭	⬭	⬭

P2 Write a number in the box to make this number sentence correct.

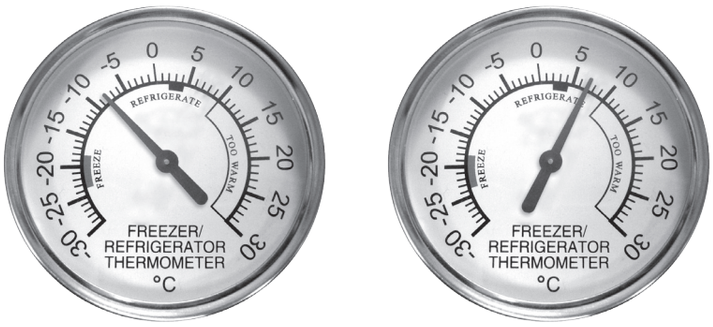
6 + 4 = ☐

1 An airline bought 6 new planes for a total cost of $721.5 million.
Each plane cost the same amount.

How much did each plane cost?

- ⬭ $120.25 million
- ⬭ $360.75 million
- ⬭ $715.5 million
- ⬭ $4329 million

2 The pictures show a thermometer at two different times.



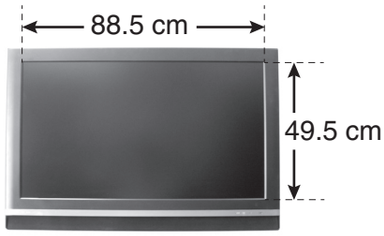
before after

By how much has the temperature risen?

5 °C	7 °C	8 °C	15 °C
⬭	⬭	⬭	⬭

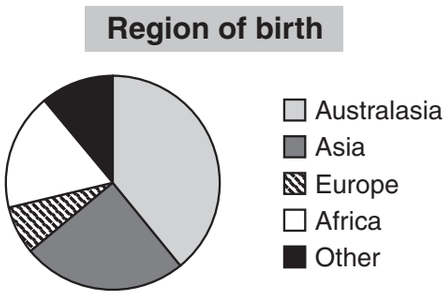
3 The diagram shows the length and width of a large TV screen.

What is the area of the TV screen?



- ⬭ 276 square centimetres
- ⬭ 2450.25 square centimetres
- ⬭ 4380.75 square centimetres
- ⬭ 7832.25 square centimetres

4 Martina asked students in her class where they were born.
She used the data to draw this graph.



Where were about a quarter of the students born?

Australasia ⬭ Asia ⬭ Europe ⬭ Africa ⬭

5 The height of this stack of DVDs is 118.8 mm.

Each DVD has a thickness of 1.2 mm.

How many DVDs are in the stack?

99 ⬭ 118 ⬭ 120 ⬭ 143 ⬭

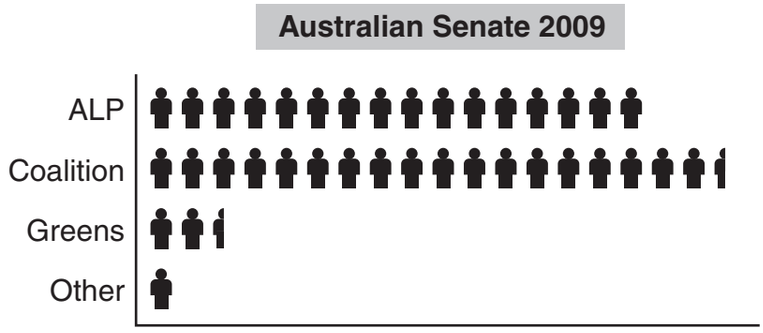
6 Casey had tests to check her vitamin and calcium levels.
The table shows her test results.

Test	Normal range	Casey's result
vitamin A	30 to 65	33
vitamin C	0.4 to 1.5	0.6
calcium	8.2 to 10.6	8.3

For which tests were Casey's results within the normal range?

⬭ vitamin A, vitamin C and calcium
⬭ vitamin A and vitamin C only
⬭ vitamin A and calcium only
⬭ vitamin C and calcium only

7 Jack saw this graph in a newspaper.
The key had been omitted from the graph.



The total number of senators in 2009 was 76.

How many senators does  represent in the graph?

1 ⬭ 2 ⬭ 4 ⬭ 5 ⬭

8 These are three pictures of the same sculpture.

The sculpture is in the shape of

- ⬭ a rectangle and a circle.
- ⬭ a rectangle and a sphere.
- ⬭ a prism and a circle.
- ⬭ a prism and a sphere.

9 During a single leap, a dancer made 3 full rotations of his body.

By how many degrees did the dancer rotate his body in this leap?

120° ⬭ 540° ⬭ 720° ⬭ 1080° ⬭

10 Which number is missing from this number sentence?

$(117.8 - 17.6) \times$ **?** $= 502.002$

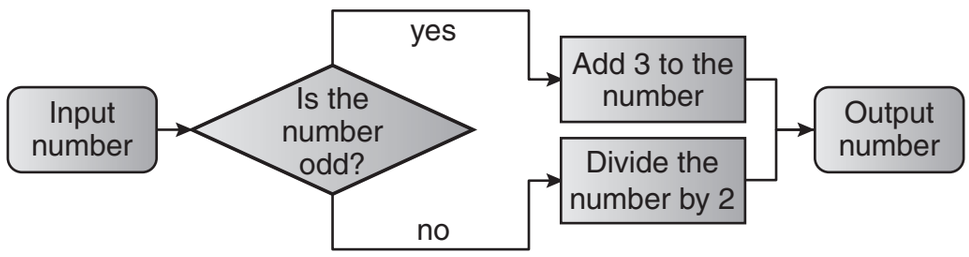
4.41 ⬭ 5.01 ⬭ 21.83 ⬭ 35.22 ⬭

11 Lee wants to bake 7 cakes.
Each cake needs 4 eggs. He has no eggs so he goes to the shop.
The shop sells eggs in cartons of 6.

How many cartons of eggs does Lee need?

2 ⬭ 4 ⬭ 5 ⬭ 7 ⬭

12 This flowchart shows the rules for a number game.



The output number is 16.

What are two possible values for the input number?

8 and 13 ⬭ 8 and 19 ⬭ 13 and 32 ⬭ 19 and 32 ⬭

13 Once a year, Finn shaves his head for charity.
He doesn't cut his hair for the rest of the year.

This year the mass of the hair he shaved off was 75 grams.

On average, about how many grams of hair did he grow **per day**?

0.2 grams ⬭ 0.75 grams ⬭ 1.4 grams ⬭ 6.3 grams ⬭

14 Which of these prisms has exactly six faces?

- ⬭ a triangular prism
- ⬭ a rectangular prism
- ⬭ a pentagonal prism
- ⬭ a hexagonal prism

15 The opening hours of a post office are shown on this sign.

How many hours each week is the post office open?

60 ⬭ 70 ⬭ 84 ⬭ 98 ⬭

16 Lorena is paid the same amount each month.
In a year she earns $30 000.

How much does she earn in 8 months?

$2 500 ⬭ $3 750 ⬭ $20 000 ⬭ $24 000 ⬭

17 Alicia has a bag of jelly beans. 30% of the jelly beans are red.
She takes a blue jelly bean from the bag and eats it.
Without looking, she takes another jelly bean from the bag.

What is the chance that this jelly bean is **red**?

- ⬭ less than 30%
- ⬭ equal to 30%
- ⬭ greater than 30%

18 At a café, a large milkshake costs 1.5 times as much as a small milkshake.

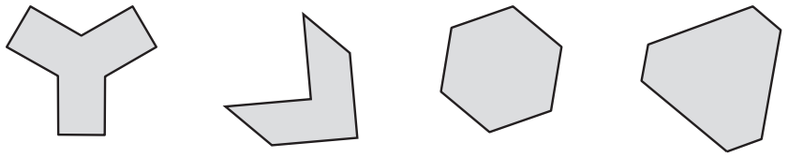
A family bought 2 large milkshakes and 2 small milkshakes.
In total the milkshakes cost $12.

How much did one **small** milkshake cost?

$2.20	$2.40	$3.00	$4.00	$4.80
⬭	⬭	⬭	⬭	⬭

19 Jason drew a shape that had six sides and exactly three lines of symmetry.

Which of these could be Jason's shape?



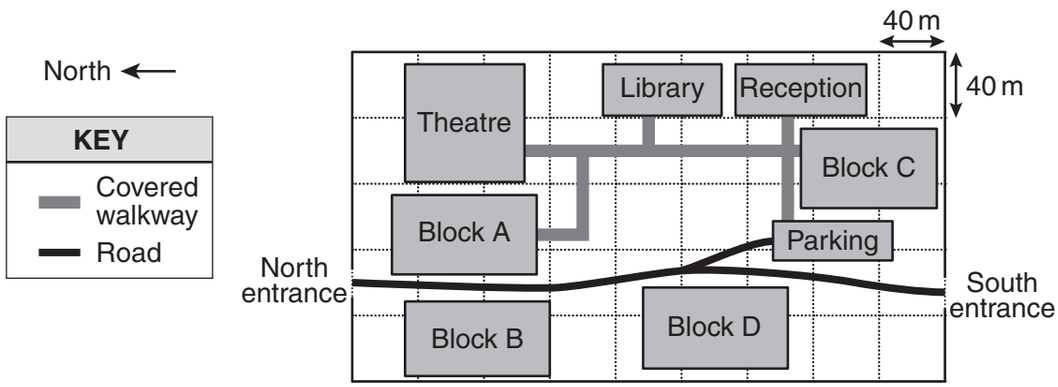
⬭ ⬭ ⬭ ⬭

20 The number 39 889 can be rounded in different ways.

Which two ways of rounding give the same answer?

- ⬭ rounding to the nearest ten and nearest hundred
- ⬭ rounding to the nearest ten and nearest thousand
- ⬭ rounding to the nearest hundred and nearest thousand
- ⬭ rounding to the nearest thousand and nearest ten thousand

21 This is a map of David's school.



David leaves the Theatre.
He heads south along the covered walkway.
He makes a left turn and walks until he reaches a building.
In total he has walked 180 metres.

Which building does David walk to?

Library ⬭ Reception ⬭ Block A ⬭ Block C ⬭

22 $\frac{1.82 + 2.73}{1.82} =$ ☐

23 Nina is making a line of tiles on a wall.
The tiles come in 6 designs and she always puts the tiles in the same order.
The picture shows the start of her line of tiles.

Each tile costs $3.50 and she uses $112 worth of tiles.

Which of these is the last tile in her line of tiles?

24 Jake made this number pattern.

2, 3, 6, 15, **?**

This is the rule for the number pattern:

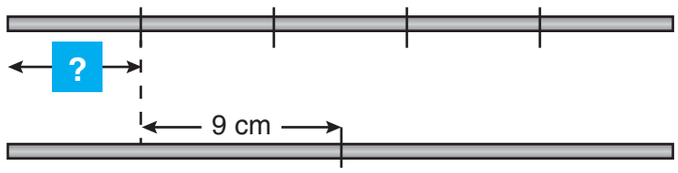
next number = *previous number* × ◆ – ◆

where each ◆ represents the same value.

What is the next number in Jake's pattern?

28	29	33	42	45
⬭	⬭	⬭	⬭	⬭

25 Tania had two identical pieces of plastic pipe.
She cut one piece into five equal lengths and the other piece in half.
The longer pieces were 9 cm longer than the short pieces, as shown.

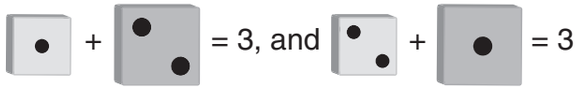


What is the length of a **short** piece of pipe?

_____ cm

26 Uma and Damien are playing a board game.
They have two standard 6-sided dice. The dice are different sizes.

Uma needs to roll a total of 3 to win.
There are two different ways she can roll a total of 3 as shown.



Damien has to roll a total of 8 to win.

How many different ways can Damien roll a total of 8?

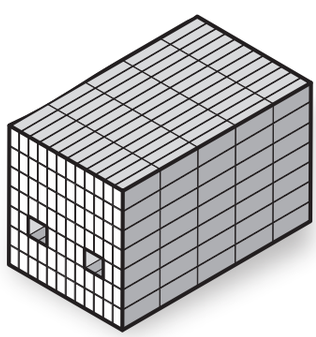
_____

27 The cross-section of a cone is the 2D shape you get when you slice it parallel to its base.

Which of these is a cross-section of a cone?

⬭ ⬭ ⬭ ⬭

28 This stack of bricks has been delivered to a building site.



The stack is 7 bricks high, 12 bricks wide and 5 bricks deep. There are two holes in the stack that go from one side to the other. Each hole is 1 brick high and 2 bricks wide.

How many bricks are in the stack?

29 Erica used a computer to make a pattern of triangles.

Number of black triangles	1	3	9	27	81	243	…
Number of white triangles	0	1	4	13	40	121	…

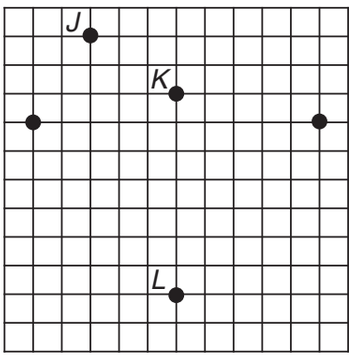
Erica continued the pattern until the shape had 6561 black triangles.

How many white triangles did the shape have?

30 How many degrees does the **hour hand** of a clock turn in 30 minutes?

degrees

31 Shauna plotted five points on this square grid.



Point *K* is 28 millimetres from point *L*.
Shauna adds a sixth point, *M*, so that the arrangement of points has one line of symmetry.

How far is point *M* from point *J*?

_____ millimetres

32 Barney has a bag of $1 and $2 coins.

The total mass of the coins is 71.4 grams.
Barney knows that:

- the mass of a $1 coin is 9 grams and
- the mass of a $2 coin is 6.6 grams.

What is the smallest mass of exactly $3 worth of coins?

_____ grams

What is the total value of the coins in the bag?

$ _____

STOP – END OF TEST

Do not turn this page.