

Year 7 NUMERACY Calculator

Test 3

INSTRUCTIONS TO STUDENTS



Use a 2B pencil to show your answers.



For the multiple-choice questions, show your answer by shading the matching bubble. If you make a mistake, erase the shading and shade the correct bubble.

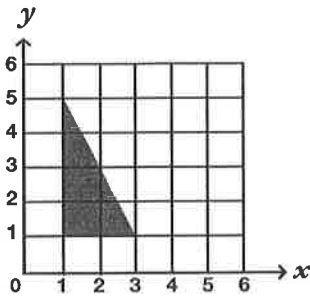
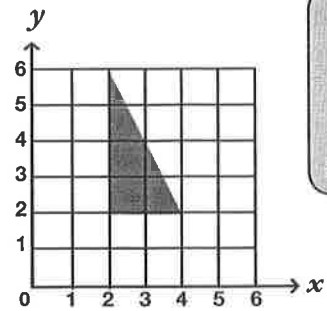


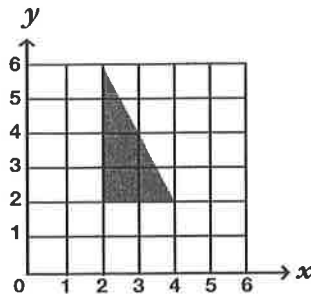
For the other questions, write your answer in the box provided. If you make a mistake, erase it and write the correct answer.

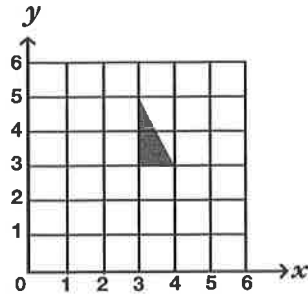
1 Ari drew a shaded triangle on a grid (shown right).

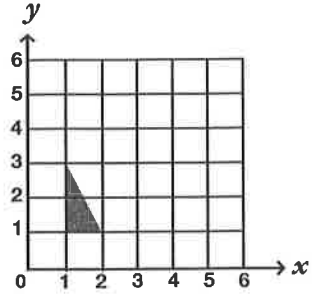
On another grid, he drew a triangle in which he halved the distances from the axes, the height and base length.

Which of the grids below shows the second triangle Ari drew?









2 If ● = 5,

□ = 4

and ● + □ = ◆ + ◆ + ◆

which number does ◆ equal?

2

3

4

5

3 The first cats appeared on Earth 34 million years ago.

People first appeared on Earth 2.5 million years ago.

How long after the first cats appeared did people first appear?

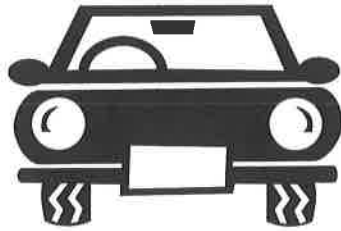
2.5 million years

31.5 million years

34 million years

36.5 million years

4 Marco drives at an average of 50 km per hour.



How many kilometres does he travel in 5 hours?

10

25

100

250

5 Two places are 3.7 cm apart on a map.

On the map, 1 cm represents 4 km.

What is the actual distance between the two places?

1.08 km

7.7 km

14.8 km

37 km

6 The population of Mycity is 211 513.

What is the population correct to the **nearest 100** people?

200 000

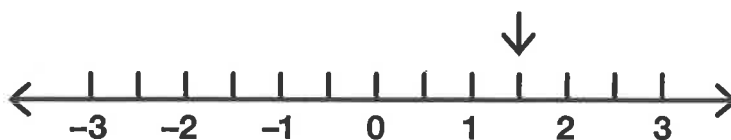
210 000

211 500

211 510

7 The arrow points to a position on the number line.

What number is at this position?

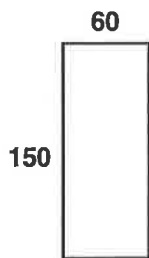


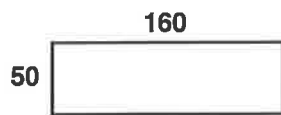


- 8 Jonah thinks of a number.
He then adds 5.
The answer is 27.
What was the number Jonah started with?

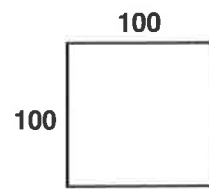


- 9 Which shape has the smallest area?









not to scale

- 10 A softdrink bottle holds 1.75 L.
How many millilitres are in the bottle when it is full?

17.5 mL

175 mL

1075 mL

1750 mL

11 Four sporting teams are flying to the Tiwi Islands for a competition.

| Sport | Number of people in a team | Total mass for team (kg) |
|--------------|----------------------------|--------------------------|
| Soccer | 11 | 1000 |
| AFL Football | 18 | 1700 |
| Rugby | 15 | 1680 |
| Basketball | 5 | 490 |



Any team with an average mass per person of more than 110 kg will have to send their luggage by boat.

Which team will have to send their luggage by boat?

Soccer

AFL Football

Rugby

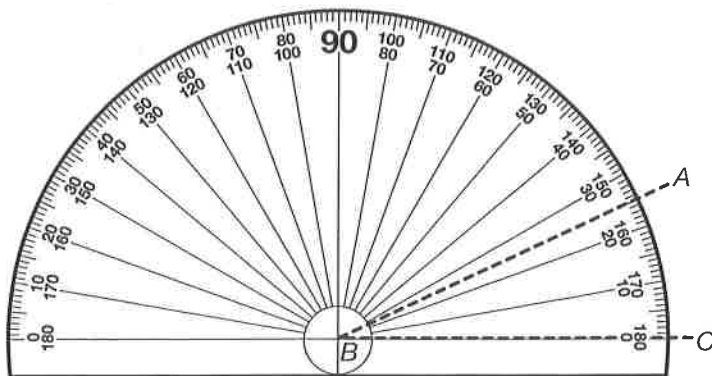
Basketball

12 What number will make this number sentence true?

$$3.47 + 2.43 = \boxed{} + 2.2$$



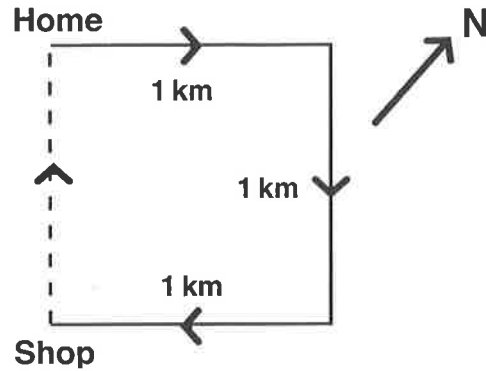
13 What is the size of angle ABC?


 °

14 Hannah ran from home to the shop around the square block as shown by the arrowed lines.

The northerly direction is labelled N.

To get straight home she must run in the direction:



north

south

north-east

north-west

15 The students in a class collected \$14.40 for a charity.

Each member of the class contributed 60 cents.

How can the number of students in the class be calculated?

$14.40 \div 60$

14.40×0.6

$14.40 \div 0.6$

14.40×60

16 $63 \times \square = 14$

What is the value of \square ?

$\frac{9}{2}$

$\frac{9}{7}$

$\frac{7}{9}$

$\frac{2}{9}$

17 Sam bought 1 kg of mince from the butcher.

He used 0.65 kg of the mince for hamburgers and 0.3 kg for spaghetti sauce.

How much mince did Sam have left?

0.9 kg

0.5 kg

0.15 kg

0.05 kg

18 A mobile phone is marked at \$500.
The shop has offered a 20% discount in their sale.
How much is the discount?



- \$10
 \$100
 \$400
 \$410

19 Each of the 20 students in a class was asked to name what they liked to read.
They chose from novels, comics and magazines.

| Type | Novels | Comics | Magazines |
|--------------------|--------|--------|-----------|
| Number of students | 6 | 10 | 4 |

From the table, what fraction of the students liked to read comics?

- $\frac{1}{5}$
 $\frac{3}{10}$
 $\frac{1}{2}$
 $\frac{3}{5}$

20 The clock on the wall shows the time.



Which of the following could **not** be the time?

- Five past 3
 3:05
 5:03
 15:05

21 The clock on the stove showed the time 13:44 when Andre put in the cake.

The cake will take 36 minutes to cook.



What time will the stove clock show when the cake is cooked?

22 This calculation gives the cost in dollars for Jana to fill the tank of her car:

$$(62 - 25) \times 1.10$$

How much does it cost her to fill her car?

\$

23 A strip from a patchwork quilt is made up of 12 squares.

Each square has side length 9.8 cm.

How long is the strip? Give your answer in centimetres.



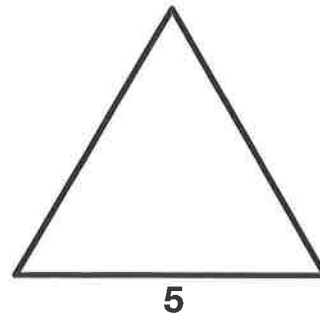
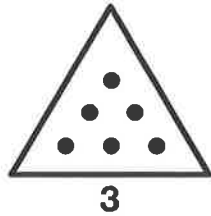
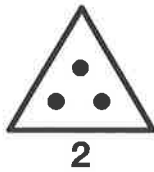
0.817 cm

1.176 m

1.224 cm

117.6 cm

24 How many dots are there on the 5th triangle in the sequence?



10

15

21

28

25 The mean (average) of 4 numbers is 28.
One more number is added and the mean becomes 30.
The number added was:

28

30

38

58

26 A rectangular prism is made up of 96 cubes.
Which of these could **not** be the dimensions of the prism?

$8 \times 4 \times 3$

$9 \times 6 \times 2$

$12 \times 1 \times 81$

$6 \times 3 \times 2$

27 A rule to calculate the total cost (\$) of buying a length (metres) of material is:

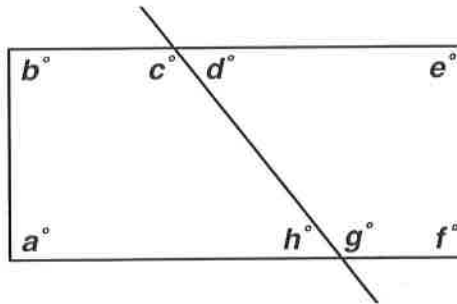
$$\text{Total cost} = (\text{length} \times \text{cost per metre of the material}) + \text{cost of cutting}$$

Use this rule to complete the table.



| Length (m) | Cost per metre (\$) | Cost of cutting (\$) | Total cost of material |
|------------|---------------------|----------------------|---|
| 4 | \$7.50 | \$2.50 | <input style="width: 100%; height: 30px;" type="text"/> |

28 A rectangle is divided into 2 parts by a straight line as shown. The angles are then labelled.



Which statement is **not** true about the sum of the angles?

$c + d + g + h = 360$

$a + b = 180$

$a + b + c + h = 360$

$b + c + d + e = 180$

29 An old family recipe has the weight of ingredients measured in ounces (oz).

The recipe includes:

12 oz espresso coffee

1 oz cocoa powder

4 oz white sugar

1 gram (g) = 0.03527 ounces (oz)

The total weight of these ingredients in grams is closest to:

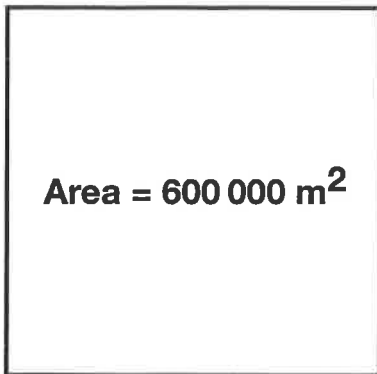
15 g

17 g

340 g

482 g

30 The area of a square paddock is $600\,000\text{ m}^2$.



What is the length of each side, to the nearest metre?

 m

31 There were four times as many passengers as crew on a ship.
There were 2000 people altogether on the ship.
How many passengers were there?

32 I am a quadrilateral with both pairs of opposite sides parallel and equal.
My diagonals intersect at right angles. What am I?



square

rhombus

parallelogram

trapezium