Choose a circle to show how much each sentence is like you

| Very <br> Unlike <br> Me | Unlike <br> Me |  | Like Me |
| :---: | :---: | :---: | :---: | | Very |
| :---: |
| Like Me |

1. I like maths at school.
2. I am good at maths.
3. My teacher thinks I am good at maths.
4. My Mum and Dad think I am good at maths.
5. I enjoy doing maths in my own time (not at school).
6. I enjoy doing things in maths that I haven't tried before.

## Practice Questions

These practice questions are to help you understand how to show your answer for different types of questions.

P01. Who is holding a card with an even number on it?
BenEruArohaDavina

P02. Complete this number pattern.
$2,4, \ldots, \square, 10$

P03. What fraction of this circle is shaded?

$\square$
$\qquad$
$\square$

P04. Match the sentence with the correct shape.
$\square$

1. I have three sides
2. I have 4 sides
a.

C.
b.



P05. Which numbers make this number sentence TRUE?

$$
2+\ngtr>5
$$12

4
5

P06. Put the numbers 1, 2, 3, and 4 in the boxes to order these numbers from biggest (1) to smallest (4).

$\square$
2
$\square$
0

P07. Select whether the following statements are True or False.
TRUE
In the number 213 , the value of 1 is ten.
In the number 504, the value of 5 is fifty.
S
FALSE
$\qquad$ $\sigma$

1. The picture shows the flowerpots in which Kevin will plant flower seeds. He needs 3 seeds for each pot.
Which of the following number sentences shows how many seeds Kevin will need for all of the pots?


$5 \times 4 \times 3=$$(5 \times 4)+3=$$(5+4) \times 3=$
$5+4+3=$
2. In the figure below, points labelled $A$ through $G$ are spaced evenly along a line.

Which of the following distances is the greatest?
From A to D
From C to F
From E to G
From E to A
03. Which of these is the number 5005014 ?Five million, five hundred and fourteenFive million, five thousand and fourteenFive thousand, five hundred and fourteen
Five billion, five million and fourteen
04. Which of the following is an even number?
$\sigma$
225
0
233
$\sigma$
370
$\sigma$
391
05. The table below shows the number of tickets sold to different events at the county fair. What was the total number of tickets sold for these four events?

## Event Tickets Sold

| Event | Number Sold |
| :--- | :---: |
| Dog Show | 2260 |
| Craft Booth | 3031 |
| Whirly Ride | 928 |
| Ferris Wheel | 1415 |7634

$\sigma$
7624
$\sigma$
6634
$\sigma$
6524
06. There are 368 buttons in a jar.

What is that number rounded to the nearest hundred buttons?
300360370
$\sigma$
400
07. What is the rule used in the table below?

| Input | Output |
| :---: | :---: |
| 1 | 3 |
| 2 | 6 |
| 3 | 9 |
| 4 | $?$ |

Add 2 to the input
Multiply the input by 2
Add 3 to the inputMultiply the input by 3
08. Which is closest to the location of point $A$ on the number line?
711
09. A piece of wood is 2.27 centimetres thick.

What is that measurement rounded to the nearest tenth of a centimetre?2.1

0
2.2
$\sigma$
2.3
$\sigma$ 2.5
10. The total area of a wall is $18 \mathrm{~m}^{2}$. A roll of wallpaper covers $8 \mathrm{~m}^{2}$. The store sells only full rolls.

What is the fewest number of rolls needed to cover the wall?1 roll
2 rolls
3 rolls
4 rolls
11. The chart shows the relationship between the time on the clock and the number of shirts Gary had finished ironing.
According to the data in the chart, how many minutes did it take Gary to iron each shirt?
GARY'S IRONING

| TIME | Total Number of <br> Shirts Ironed |
| :---: | :---: |
| $8: 15$ | 0 |
| $8: 31$ | 2 |
| $8: 47$ | 4 |
| $9: 03$ | 6 |

2 minutes
$\sigma$
6 minutes8 minutes
$\sigma$
48 minutes
12. Which one of the following is the same as $3 \times 3 \times 3 \times 3=$ ?$3^{4}$
$\sigma$
$4^{3}$
0
27
$\sigma$
$3 \times 4$
13. On which number line does the letter $N$ represent the integer -1 ?

$\qquad$


$\sigma$

14. Which is the BEST estimate for $11.3 \times 14.6$ ?
$\infty$ 100
$\sigma$ 140150
$\sigma$ 190
15. In $\triangle A B C, A B$ measures 6 centimetres and $B C$ measures 8 centimetres. What is the length of $A C$ ?

1.41 cm2 cm5.29 cm
$\sigma$
10 cm
16. Given: $B, C$ and $D$ are collinear;
$\mathrm{m} \angle \mathrm{ACD}=85^{\circ}$
What value of $x$ will ensure that $A, C$, and $E$ are also collinear?
7585
$\square$ 95105
17. Anita is making bags of treats for her sister's birthday party. She divides 65 pieces of candy equally among 15 bags so that each bag contains as many pieces as possible. How many pieces will she have left?335430.33
18. Carla's softball team is selling chocolates to earn money for uniforms. The list shows the number of boxes of chocolates each member of the team sold.
Which of the following stem-and-leaf plots shows this same information?

| 22 | 10 | 31 | 19 |
| :--- | :--- | :--- | :--- |
| 38 | 27 | 44 | 12 |
| 14 | 42 | 35 | 27 |

0

| Stem | Leaf |
| :---: | :--- |
| 1 | $2,4,9$ |
| 2 | $2,7,7$ |
| 3 | $1,5,8$ |
| 4 | 2,4 |


| Stem | Leaf |
| :---: | :--- |
| 1 | $0,2,4,9$ |
| 2 | 2,7 |
| 3 | $1,5,8$ |
| 4 | $2,4,4$ |


| Stem | Leaf |
| :---: | :--- |
| 1 | $0,2,4,9$ |
| 2 | $2,7,7$ |
| 3 | $1,5,8$ |
| 4 | 2,4 |


| Stem | Leaf |
| :---: | :--- |
| 1 | 4 |
| 2 | 3 |
| 3 | 3 |
| 4 | 2 |

19. In the diagram below, lines $l$ and $p$ intersect.

If the measure of $\angle a$ is $109^{\circ}$, what is the measure of $\angle b$ ?

$109^{\circ}$$100^{\circ}$$71^{\circ}$$19^{\circ}$
20. Which of the following is the value of $P$ for the problem below? $P \times 72=2232$
$\qquad$ 2304
$\sigma$
2160
$\sigma$ 72
$\sigma$ 31
21. The chart below shows the average price per share of HiTek stock for each month in 2001.

Which of the curves BEST models the general behaviour of the stock's price for 2001?

## 2001 HiTek Stock Prices

| Month | January | February | March | April | May | June | July | August | September | October | November | December |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Average <br> Price (in \$) | 22.61 | 24.25 | 31.02 | 27.31 | 29.92 | 33.10 | 36.14 | 35.50 | 34.01 | 31.05 | 36.20 | 40.12 |

A.

B.

c.

D.

22. Look at the circle with centre $O$.

The line segment $A B$ appears to be

$\sigma$
an arc.
a perimeter.
$\sigma$
a radius.
$\sigma$
a diameter.
23. Which point represents $(5,2)$ on this graph?

$\bigcirc$ Point $K$
Point $L$
$\sigma$
Point $M$
Point $N$
24. Barry's daily grades for one grading period are shown below.

94, 88, 87, 92, 78, 88, 93, 100, 92, 90, 92, 85
What was the mode of his daily grades?93929190

## Use the following information to answer questions 25 to 27.

This graph shows how scared Dominic got when he went camping with his family.


Dominic said "When mum sent me into the tent at $8.00 \mathrm{pm} /$ got scared because it was dark and I was on my own. At 8.30 pm mum came to tuck me in and read a story. I wasn't scared any more. Mum went back outside at 9:00pm. Then ..."
Using the graph, fill in the spaces to show what may have happened to Dominic and how he felt about it.
25.

Time

## Event

Dominics's Feelings
9.00pm
26.

Time
Event
Dominics's Feelings
9.35pm $\qquad$
27.

| Time | Event | Dominics's Feelings |
| :--- | :--- | :--- |
| 10.00 pm |  |  |

28. The graph shows the number of books checked out at the public library each day last week.
On which day were there 3 times as many books checked out as on Tuesday?

| Books Checked Out |  |
| :---: | :---: |
| Monday | [1] [] |
| Tuesday | [1] [1] |
| Wednesday | [7 [7] |
| Thursday | [1] |
| Friday | प] [1] [] ] |
| Saturday | (1) [] [] [1 日] [] |

WednesdayThursday

Friday
Saturday
29. In the centre section of an auditorium, each row has 2 more seats than the row in front of it.
The front row of the section contains 23 seats.
How many seats are in the 10th row from the stage?

$\qquad$ 333941
$\sigma$ 43
30. Prabhu had $\$ 5$ to buy milk, bread and eggs. When he got to the shop he found that the prices were those shown below.
At which of these times would it make sense to use estimates rather than exact numbers?


When Prabhu tried to decide whether $\$ 5$ was enough money.
When the shopkeeper entered each amount in the cash register.
When Prabhu was told how much he owed.
$\sigma$
When he received his change.
31. Of the 50000 overseas students who attended school in New Zealand in 2000, how many were from either Europe OR Asia?

Origin of Overseas Students in New Zealand Schools.


- 3300027000210006000

32. How many sections of the spinner shown below should be coloured blue in order to make the probability of the arrow landing on blue 0.375 in a single spin?


- 57

33. Mr Mitchell owns a petrol station. He changes the prices of petrol once each week. The graph below shows the weekly prices in February.
Which of the following statements is supported by the data on the graph?


The price of petrol rose each week.
Petrol was cheapest the week of February 1.
The average price in February was less than $\$ 1.00$.On February 28 the price of petrol was about $\$ 1.05$.The price of petrol on March 15 will be $\$ 1.10$.
34. 42, 51, 49, 58, 56,

If the pattern in the list above continues, what will be the next number after 56 ?

54
63
646567
35. Scott made a box-and-whisker graph of the soccer goals made by the players in his district.
What is the range of the goals made by the players?
241864
36. In the figure below, if $A B C D$ is a square, then the coordinates of vertex $C$ are

$(4,5)$
$(3,-4)$(3, -2)$(5,-4)$
$(5,-2)$
37. What kind of answer results when a rational number is multiplied by zero?The answer is zero.The answer is the original number.The answer depends on the original number.The answer is the opposite sign of the original number.
38. The table shows $p$, the charge in cents, for a long-distance phone call that lasts $t$ minutes.
What describes this relationship?

| $\boldsymbol{t}$ | $\boldsymbol{p}$ |
| :---: | :---: |
| 1 | 20 |
| 2 | 28 |
| 3 | 36 |
| 4 | 44 |

$$
\begin{aligned}
& p=20 t+12 \\
& p=8 t+12 \\
& p=11 t \\
& p=20 t
\end{aligned}
$$

39. What is the same about all of these boxes?

They all have six sides and

twelve edges.
twelve corners.
eight edges.
four corners.
40. In a bag of cards $\frac{1}{6}$ are green, $\frac{1}{12}$ are yellow, $\frac{1}{2}$ are white and $\frac{1}{4}$ are blue. If someone takes a card from the bag without looking, which colour is it MOST likely to be?
$\qquad$ Green
$\sigma$
Yellow
White
Blue
41. Put these numbers in the correct order from lowest to highest.
6.254
6.24
6.054
6.405
5.65
lowest
highest
42. There are 1200 students enrolled in Adams Intermediate School.

According to the graph below, how many of these students participate in sports?

> STUDENT PARTICIPATION IN ACTIVITIES
> AT ADAMS INTERMEDIATE SCHOOL

43. Write six million, thirty-three thousand, one hundred and three in digits.
44. The box-and-whisker plot shown below represents the approximate length (in centimetres) of fish caught by tourists on a charter fishing boat. What is the range of the data?

45. Which is read
"fifty-five and twenty-one thousandths"?55210005521055.2155.021
46. The graphs show numbers of baskets made by Paul and Terrell during 5 basketball practise sessions. They each take 100 practise shots in each practise session.
According to the information in these graphs, who was more successful at making baskets?


Paul did much better.
Terrell did much better.
Their scores appear to be about the same.More information is needed to make a decision.
47. In the accompanying diagram, parallel lines / and $m$ are cut by transversal $t$. Which statement about angles 1 and 2 must be TRUE?

$\angle 1=\angle 2$.
$\angle 1$ is the complement of $\angle 2$.
$\angle 1$ is the supplement of $\angle 2$.$\angle 1$ and $\angle 2$ are right angles.
48. If $a+b=a$, then $b$ equals
$\sigma$
-1
$\sigma$
0
$\sigma$ 1
$\sigma$ -a
49. Sarah is filling numbers in the Venn diagram. No number is to be entered more than once.
What is the least number that can be appropriately placed in the shaded area of the diagram?

50. In the five quadrilaterals shown below, the midpoints of the sides have been joined by broken line segments.
Which BEST describes the five dotted figures formed?


All are parallelograms.
All are rectangles.
$\sigma$
All are square.
$D$
All are rhombi.
$\sigma$
No generalisation can be made.
51. What values of $a$ and $b$ make quadrilateral $M N O P$ a parallelogram?


$$
a=1, b=5
$$

$$
a=5, b=1
$$$a=\frac{11}{7}, \quad b=\frac{34}{7}$

$\circ$
$a=\frac{34}{7}, b=\frac{11}{7}$

