

Mathematics

First Name

Last Name

School Name

Room Number / Class

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

Very Unlike Me 1	Unlike Me 2	Like Me 3	Very Like Me 4
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01. It is very important to me to be good at maths.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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02. I try to get more maths answers right than my friends.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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03. I like hard, challenging maths.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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04. I do as much school work as possible in maths.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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05. I like to help my friends with their maths school work.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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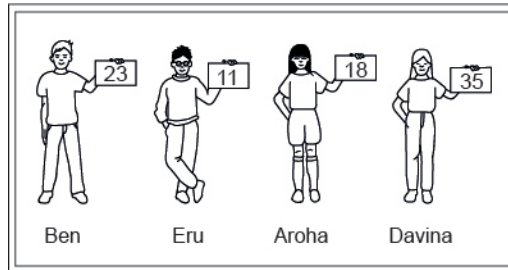
06. I like it when the maths examples are hard.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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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?

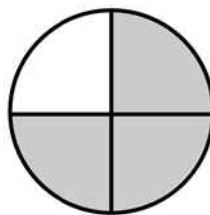


- Ben
- Eru
- Aroha
- Davina

P02. Complete this number pattern.

2, 4, _____, _____, 10

P03. What fraction of this circle is shaded?





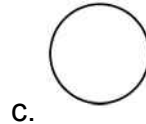
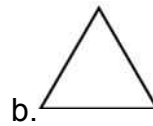
P04. Match the sentence with the correct shape.



1. I have three sides



2. I have 4 sides



P05. Which numbers make this number sentence **TRUE**?

$$2 + \star > 5$$

1

2

3

4

5

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



3



7



2



0

P07. Select whether the following statements are True or False.

In the number 213, the value of 1 is ten.

TRUE

FALSE

In the number 504, the value of 5 is fifty.

01. Which digit is in the *hundreds of thousands* place in the number 6 750 123?

- 0
- 1
- 5
- 7

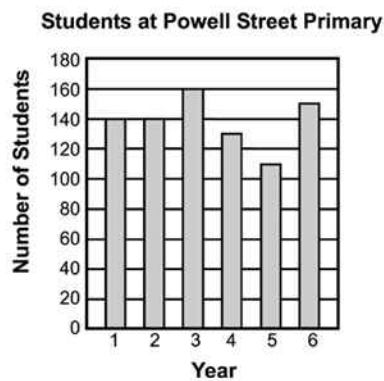
02.

$\star > 24$ The value of the \star could be

- 2
- 4
- 24
- 42

03. The graph shows the number of students in each Year at Powell Street Primary School.

About how many more students are in Year 6 than Year 5?



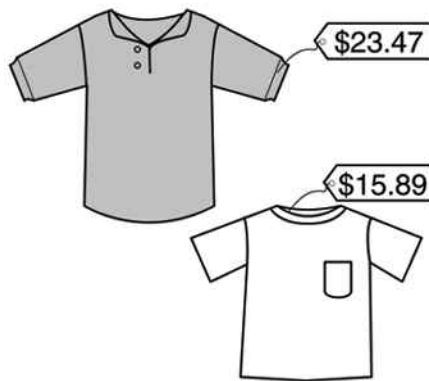
- 12
- 20
- 31
- 40

04. Peta was asked to write these numbers in order with the largest number first. Which number should come first?

465 645 456 449

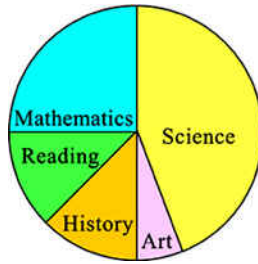
- 465
- 645
- 456
- 449

05. Lark bought the two shirts shown below. What was the total cost of the two shirts?



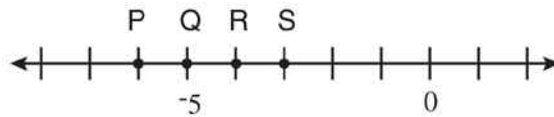
- \$39.26
- \$39.36
- \$40.26
- \$40.36

06. The pie chart below shows the portion of time Pat spent on homework in each subject last week.
If Pat spent 2 hours on mathematics, about how many hours did Pat spend on homework altogether?



- 4
- 8
- 12
- 16

07. Which letter on the number line **BEST** identifies the location of -6?



- P
- Q
- R
- S

08. $24 \div (6 \div 2) =$

- 8
- 6
- 3
- 2

09. $12.08 \times 1.7 =$

- 2 053.6
- 205.36
- 20.536
- 2.0536

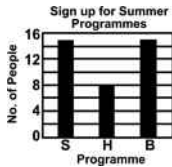
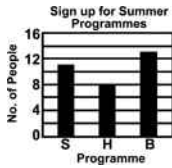
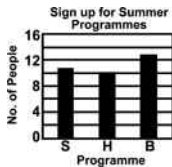
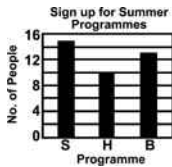
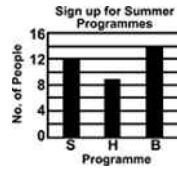
10. The difference of $21\,234 - 19\,078$ is **BEST** described as

- a little more than 1000.
- a little more than 1500.
- a little more than 2000.
- a little more than 2500.

11. The town of Raymond offered swimming (S), hiking (H), and basketball (B) programmes to people last summer. The graph below shows the number of people who signed up in advance for each programme.

At the last minute, 2 people dropped out of the swimming programme, 1 person joined the hiking programme, and 1 person switched from basketball to swimming.

Which graph shows the correct information after these changes?



12. The decimal 0.25 expressed as a percentage is

0.25%

2.5%

25%

250%

13. $82 \times 69 =$

- 5558
- 5658
- 6238
- 12 030

14. Irene is making a tessellation using the shape shown below.
Which of the following tessellations can be made using only a clockwise rotation?



-
-
-
-

15. The value of $\frac{51.92 \times 202}{4.93}$ is *closest* to

- 20
- 200
- 2000
- 20 000

16. There are 15 girls and 11 boys in a mathematics class.

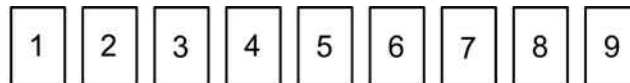
If a student is selected at random to run an errand, what is the probability that a boy will be selected?

- $\frac{4}{26}$
- $\frac{11}{26}$
- $\frac{15}{26}$
- $\frac{11}{15}$
- $\frac{15}{11}$

17. Chris put the cards below in a box.

Without looking, he draws a card from the box.

What is the probability he will draw a card showing a **multiple of 4**?



- $\frac{4}{9}$
- $\frac{2}{9}$
- $\frac{1}{9}$
- 0

18. Carol is conducting an experiment to see which colour of sweetened water will attract more hummingbirds. Her first step is to formulate questions necessary for data collections. Which of the following questions is **NOT** necessary to collect the data?

- How many times per minute do hummingbirds' hearts beat?
- What distance above the ground should the feeders be hung?
- For how many hours should Carol collect the data?
- How much sugar should be mixed with the water in each feeder?

19. This is a list of Beth's English homework scores for the grading period.
 93, 83, 64, 84, 76, 83, 78, 76, 60, 81
 Which stem-and-leaf plot correctly displays the information?



Stem	Leaf
6	
7	
8	
9	



Stem	Leaf
6	4
7	6,8
8	1, 3, 4
9	3



Stem	Leaf
6	4
7	6,6, 8
8	1, 3 3, 4
9	3



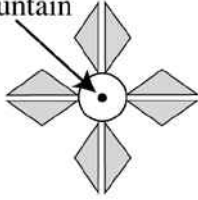
Stem	Leaf
6	0, 4
7	6, 6, 8
8	1, 3, 3, 4
9	3

20. Omar is designing a garden around a circular fountain. He plans for the garden to have a 60° rotational symmetry about the centre of the fountain.

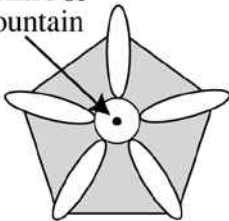
Which of the following shaded designs for the garden would satisfy Omar's plan?



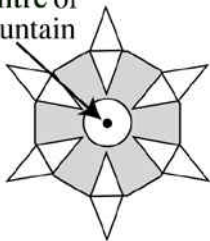
Centre of Fountain



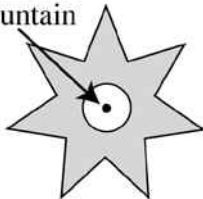
Centre of Fountain



Centre of Fountain



Centre of Fountain

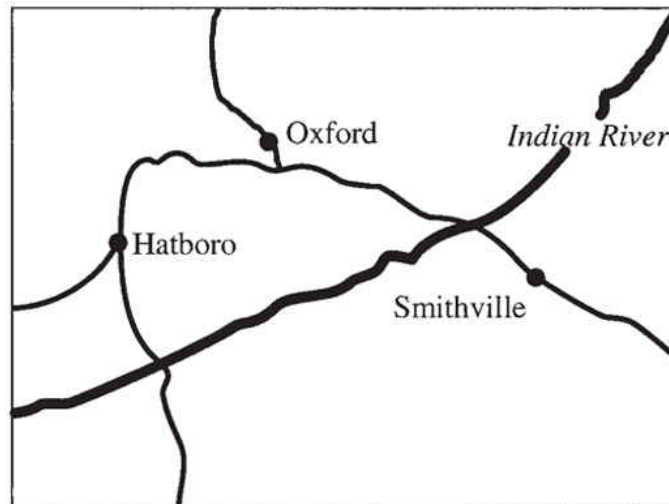


21.

$$\begin{array}{r} 103.06 \\ - 17.59 \\ \hline \hline \end{array}$$

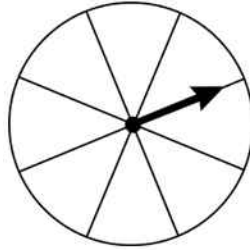
- 96.65
- 95.53
- 86.57
- 85.47

22. One centimetre on the map represents 8 kilometres on the land.
About how far apart are Oxford and Smithville on the land?



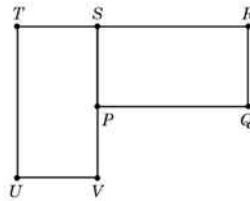
- 4 km
- 16 km
- 30 km
- 50 km

23. 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?



- 1
- 3
- 5
- 7

24. Rectangle $PQRS$ can be rotated (turned) onto $TUVS$. What point is the centre of rotation?

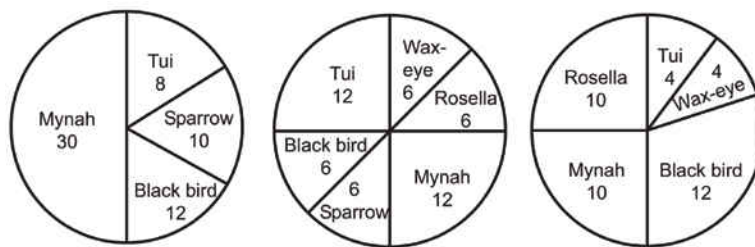


- P
- R
- S
- T
- V

25. A flight engineer for an airline flies an average of 2 923 kilometres per week. Which is the **BEST** estimate of the number of kilometres she flies in 3 years?

- 150 000
- 300 000
- 450 000
- 600 000

26. Andrew recorded the number and type of birds that visited his birdfeeder over 3 days. What was the mean number of Black birds visiting the feeder?



- 7
- 8
- 9
- 10

Use the following information to answer questions 27 to 28.

1, 3, 7, 15, __, __

27. Complete this pattern.

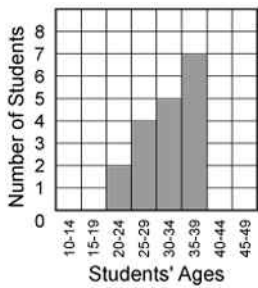
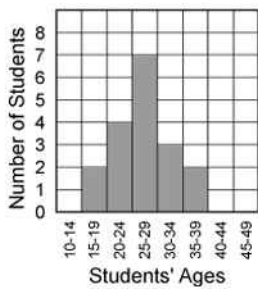
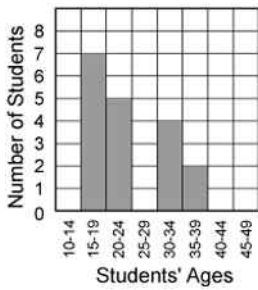
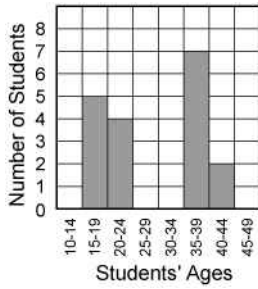
1, 3, 7, 15, _____, _____

28. What is the rule for this pattern?

End of Section

29. The chart below shows a random sample of students' ages at a community college. Administrators at the college constructed a histogram of the students' ages. Which of the following histograms **BEST** represents the distribution of students' ages?

22	18	35	43	44	19
18	38	36	20	19	37
37	20	19	38	38	21



30. Sheena found out the price of four different sized bottles of shampoo. Which one was the **BEST** value?



31. A circular mirror has a radius of 12 centimetres.
What is the circumference of this mirror in terms of π ?

- 12π centimetres
- 24π centimetres
- 36π centimetres
- 48π centimetres

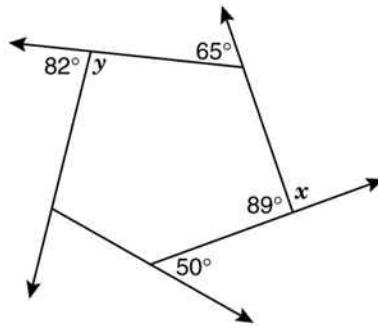
32. In a bag of coloured pencils there are 13 red coloured pencils, 13 green coloured pencils, 13 yellow coloured pencils, and 13 blue coloured pencils.
If you choose 1 coloured pencil from the bag, what is the probability the coloured pencil will **NOT** be blue?

- $\frac{1}{4}$
- $\frac{1}{2}$
- $\frac{2}{3}$
- $\frac{3}{4}$

33. The percent scores for 5 tests are listed below.
45, 62, 76, 78, 99
Which statement about the data is **MOST** reasonable?

- The mean is close to 50
- The mean is close to 54
- The mean is close to 70
- The mean is close to 80

34. What are the values of x , and y ?

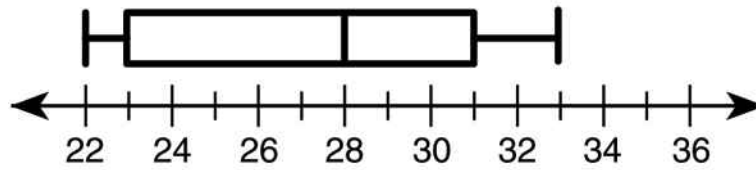


- $x = 91^\circ, y = 98^\circ$
- $x = 91^\circ, y = 108^\circ$
- $x = 101^\circ, y = 98^\circ$
- $x = 101^\circ, y = 108^\circ$

35. A bag contains 8 blue, 3 red, and 6 white chips. Only red chips are added to the bag. How many red chips must be added to the bag for the probability of drawing a red chip to be $\frac{1}{3}$?

- 2
- 3
- 4
- 6

36. The box-and-whisker plot shows the class sizes in 15 schools. Which statement concerning the class sizes must be **TRUE**?



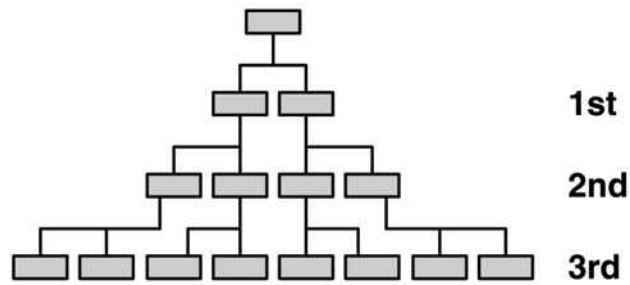
- The range of size is 8.
- The largest class is 31.
- Half of the classes are larger than 23.
- The median class size is 28.

37. Jupiter is approximately 7.78×10^8 kilometres from the sun. Written as a whole number, the distance is

- 77 880 000 km
- 77 800 000 km
- 778 108 000 km
- 778 000 000 km

38. Lauren is studying her genealogy and has started a family tree of ancestors from which she is directly descended.

Lauren has been able to identify direct ancestors for six previous generations. How many direct ancestors does she have in the 6th generation before hers?



- 12
- 16
- 32
- 64

39. Which of the following is **NOT** a prime number?

- 2
- 5
- 17
- 121

40. The chart below describes the speed of four desktop printers. Which printer is the **fastest**?

Printer	Description
Roboprint	Prints 2 pages per second
Voltronn	Prints 1 page every 2 seconds
Vantek Plus	Prints 160 pages in 2 minutes
DLS Pro	Prints 100 pages per minute

- Roboprint
- Voltronn
- Vantek Plus
- DLS Pro

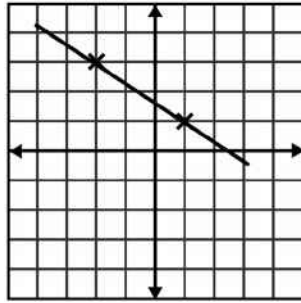
41. Which number comes next in this sequence?
3, 5, 9, 17, 33, 65,...

- 97
- 98
- 129
- 132

42. If the area of a rectangle is $8x^2 - 12x$, the dimensions of the rectangle could be

- $2x$ and $(x - 3)$.
- $4x$ and x .
- $4x$ and $(2x - 3)$.
- $4x$ and $(x - 3)$.

43. What is the slope of the line shown?



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

44. From a shipment of 500 batteries, a sample of 25 was selected at random and tested. If 2 batteries in the sample were found to be dead, how many dead batteries would be expected in the entire shipment?

- 10
- 20
- 30
- 40
- 50

45. Which of these is equal to $2x - 3y + 7x + 5y$?

- $5x + 2y$
- $5x + 8y$
- $9x + 2y$
- $9x + 8y$

Use the following information to answer questions 46 to 48.

Complete each question to show equivalence.

(Do **not** fill in the shaded boxes.)

Decimal

Fraction

Percentage

46.

0.02



47.



$\frac{5}{8}$

48.



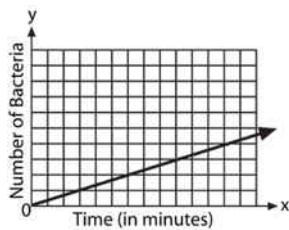
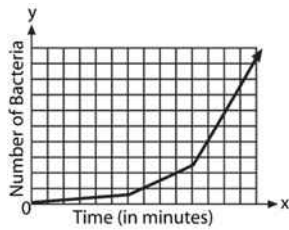
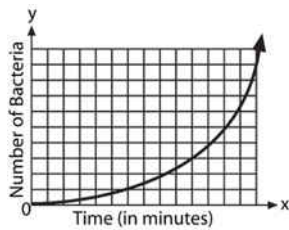
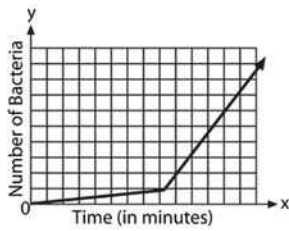
36%

End of Section

49. The table shows the number of bacteria present at 30 minute intervals during a science experiment. Which of these graphs **BEST** shows the relationship between time and the number of bacteria present?

Number of Bacteria Over Time

Time (in minutes)	Number of Bacteria
0	3
30	6
60	12
90	24
120	48
150	96
180	192
210	384



50. Which of the following is closest to 1?

- $\frac{7}{112}$
- $\frac{57}{76}$
- $1\frac{3}{10}$
- $1\frac{4}{9}$

51. Which box-and-whisker graph **BEST** represents the stem-and-leaf plot?

Stem	Leaf
5	22588
6	112579
7	3566
8	124

-
-
-
-