

# Year 8 Class 27 questions

## Q1

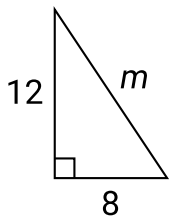
Maya has gold and silver jewellery in the ratio 2:5.

How many silver pieces of jewellery does she have if there are 12 gold pieces of jewellery?

30

## Q2

Find  $m$  correct to 1 decimal place.



(1 d.p.)  
14.4

## Q3

A triangle has sides of 6 cm, 8 cm and 9 cm. Is it right-angled?

Yes  No

## Q4

Choose the best method for collecting data to vote at an election for the local council.

census  sample

## Q5

There are 5 members in a band.

Name	Age
Pete	23
Angela	25
Ben	18
Craig	37
Kim	23

What is the mean age?

25.2

What is the median age?

23

Which age is an outlier?

37

## Q6

Ruby and Finn share a packet of biscuits in the ratio 6:7.

If Ruby has 30 biscuits, how many biscuits are there altogether?

65

## Q7

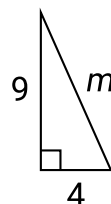
In an SRC election, the votes for Lucy and Jake were split in the ratio 7:5.

If Lucy received 63 votes, how many votes were cast altogether?

108

## Q8

Written as a surd,  $m$  equals



$\sqrt{104}$

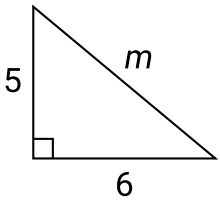
$\sqrt{72}$

$\sqrt{97}$

$\sqrt{52}$

**Q9**

Written as a surd,  $m$  equals



- $\sqrt{68}$
- $\sqrt{60}$
- $\sqrt{22}$
- $\sqrt{61}$

**Q10**

A triangle has sides of 1.2 km, 1.3 km and 500 m. Is it right-angled?

- Yes
- No

**Q11**

$\{11, 60, m\}$  is a set of 3 numbers written in ascending order which form a Pythagorean triad. Find the value of  $m$ .

$m =$

**Q12**

What type of sampling is being used?

Questioning every fifth customer at a take away food shop.

- Systematic
- Stratified
- Random

**Q13**

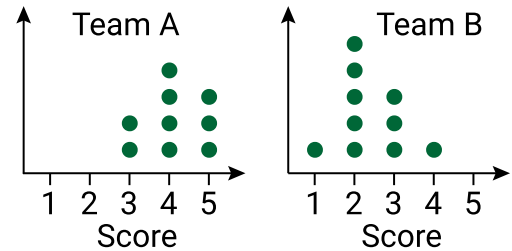
What type of sampling is being used?

Record the colour of every second car that drives through a roundabout.

- Random
- Stratified
- Systematic

**Q14**

Two teams entered a gymnastics competition. Each member of the team was given a score out of 5.



Which team has more members?

- Team A
- Team B

Which team has a higher range of scores?

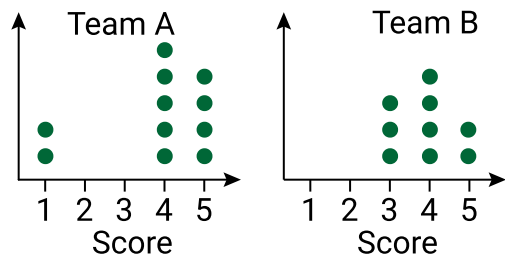
- Team A
- Team B

Which team has the higher median score?

- Team A
- Team B

### Q15

Two teams entered a skating competition. Each member of the team was given a score out of 5.



Which team has more members?

- Team A       Team B

Which team has a higher range of scores?

- Team A       Team B

How many members of Team A scored below everyone in Team B?

2

### Q16

In a park the ratio of gum trees to wattle trees is 9:7. There are 42 wattle trees.

Find the difference between the number of gum trees and wattle trees.

12

### Q17

In a display room the model aeroplanes to model cars is 5:3. There are 21 model cars on display.

Find the difference between the number of model cars and model aeroplanes.

14

### Q18

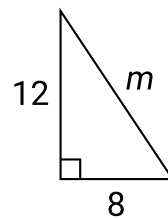
The ratio of boys to girls in a pre-school is 5:8. Currently there are 16 girls in the pre-school. Next week, 3 girls are leaving while 5 new boys will join the pre-school.

Find what the new ratio of boys to girls will be.

:  15:13

### Q19

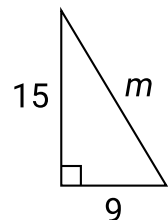
Written as a surd,  $m$  equals



- $\sqrt{208}$   
  $\sqrt{192}$   
  $\sqrt{214}$   
  $\sqrt{40}$

### Q20

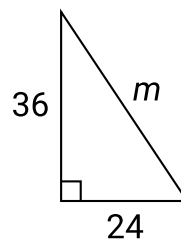
Written as a surd,  $m$  equals



- $\sqrt{48}$   
  $\sqrt{270}$   
  $\sqrt{314}$   
  $\sqrt{306}$

### Q21

Written as a surd,  $m$  equals



- $\sqrt{1872}$   
  $\sqrt{120}$   
  $\sqrt{1728}$   
  $\sqrt{1877}$

**Q22**

{16,  $m$ , 34} is a set of 3 numbers written in ascending order which form a Pythagorean triad. Find the value of  $m$ .

$$m = \boxed{\phantom{000}}$$

30

**Q23**

{27,  $m$ , 45} is a set of 3 numbers written in ascending order which form a Pythagorean triad. Find the value of  $m$ .

$$m = \boxed{\phantom{000}}$$

36

**Q24**

{40,  $m$ , 58} is a set of 3 numbers written in ascending order which form a Pythagorean triad. Find the value of  $m$ .

$$m = \boxed{\phantom{000}}$$

42

**Q25**

The table shows the number of students at Parkes High.

Year	No. of students
9	185
10	178
11	182
12	176
Total	721

A stratified random survey of 50 students was conducted:

What percentage of students should be from Year 9?

21.6% ➔ 25.7%      28.3%      32.4%

How many Year 12 students should be surveyed?

14      176      9      ➔ 12

**Q26**

A school with 850 students is conducting a random survey. Each student is given an identity number from 1 to 850. The number 0.4 is given to identify a student to survey.

What is the identity number of the student to be surveyed?

$$\boxed{\phantom{000}} \quad 340$$

**Q27**

A school with 630 students is conducting a random survey. Each student is given an identity number from 1 to 630. The number 0.7 is given to identify a student to survey.

What is the identity number of the student to be surveyed?

$$\boxed{\phantom{000}} \quad 441$$

**Q28**

Mr Nolan and Ms Walker teach the senior maths classes at a school. Their students sat a test and their results are shown below.

Mr Nolan		Ms Walker
	3	2
6	4	2 4
5	5	0 8
8	6	2
8 6 0	7	0 2 6 8
	8	
4 4	9	0

What was the highest mark in Ms Walker's class?

$$\boxed{\phantom{000}} \quad 90$$

What was the highest overall mark?

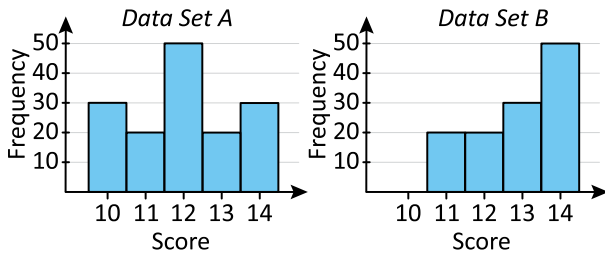
$$\boxed{\phantom{000}} \quad 94$$

Find the difference between the median marks of the two classes.

$$\boxed{\phantom{000}} \quad 11$$

**Q29**

Consider the data sets below.



Which data set has the highest mode?

- Set A       Set B

Which data set is symmetrical?

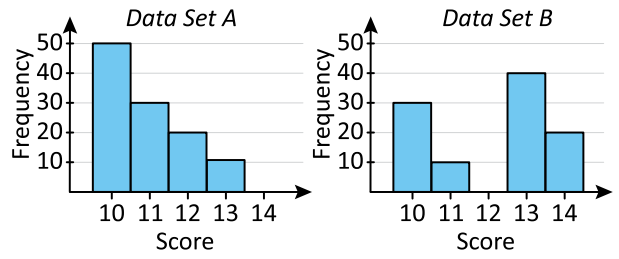
- Set A       Set B
- Both sets       Neither

Which data set is skewed?

- Set A       Set B
- Both sets       Neither

**Q30**

Consider the data sets below.



Which data set has the highest mode?

- Set A       Set B

Which data set is symmetrical?

- Set A       Set B
- Both sets       Neither

Which data set is skewed?

- Set A       Set B
- Both sets       Neither