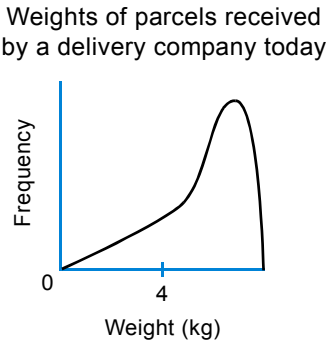
F.2 Mathematics

MC Exercise

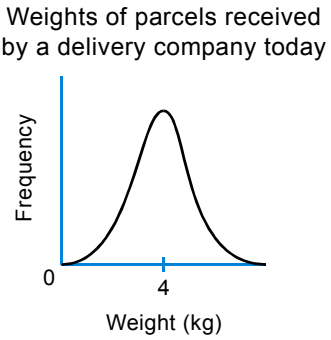
2A7 More About Statistical Graphs

1. It is known that a delivery company has received 580 parcels today where most of them weigh less than 4 kg. Which of the following frequency curves can most probably represent the weights of the parcels received by the company today?

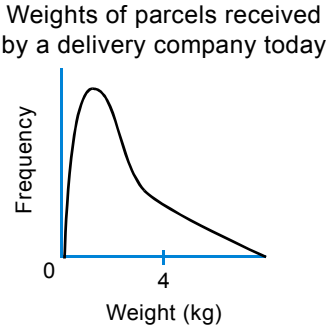
A.



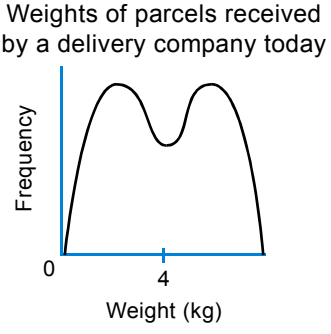
B.



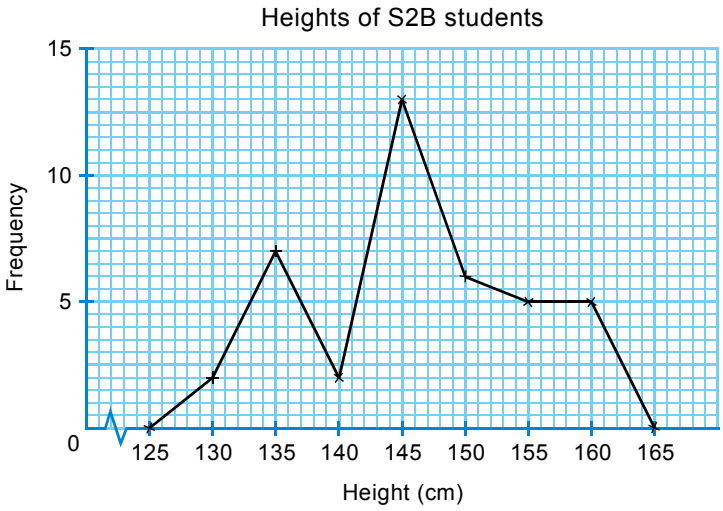
C.



D.



2. The following frequency polygon shows the heights of S2B students.



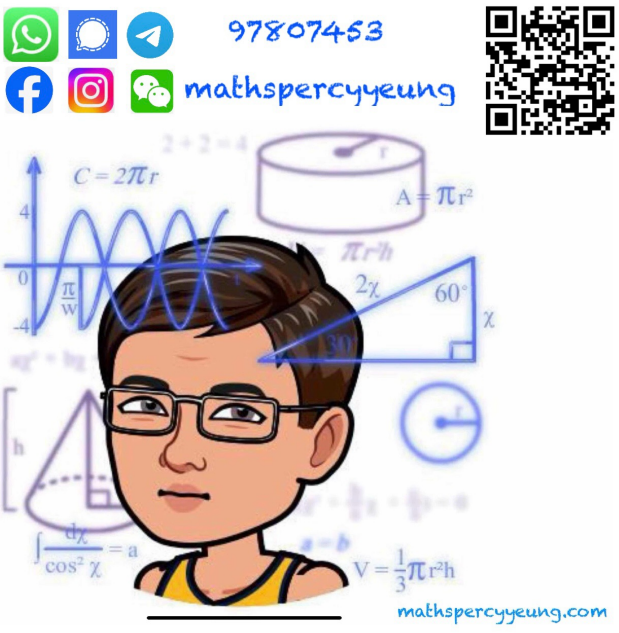
How many students are there in the class?

A. 35

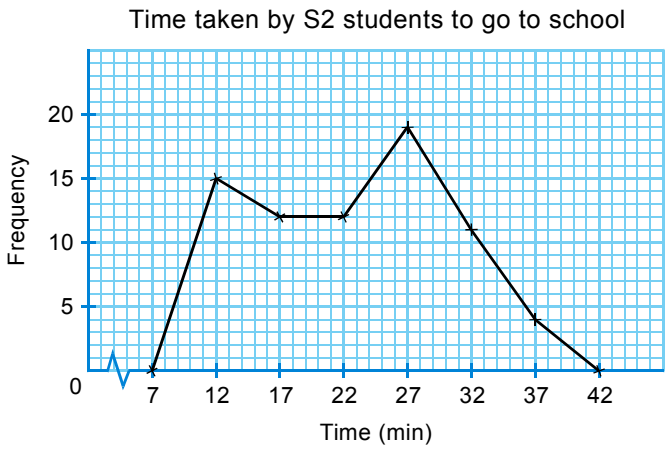
B. 38

C. 40

D. 42



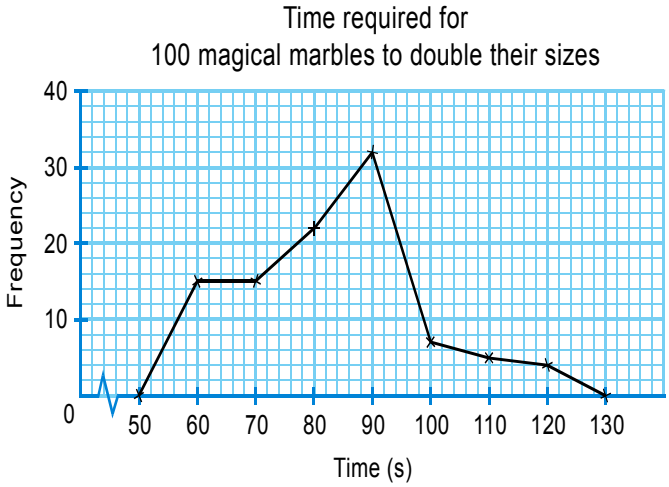
3. The following frequency polygon shows the time taken by S2 students to go to school.



Which class interval do most students belong to?

A. 10 min - 14 min
B. 17 min - 22 min
C. 25 min - 29 min
D. 27 min - 32 min

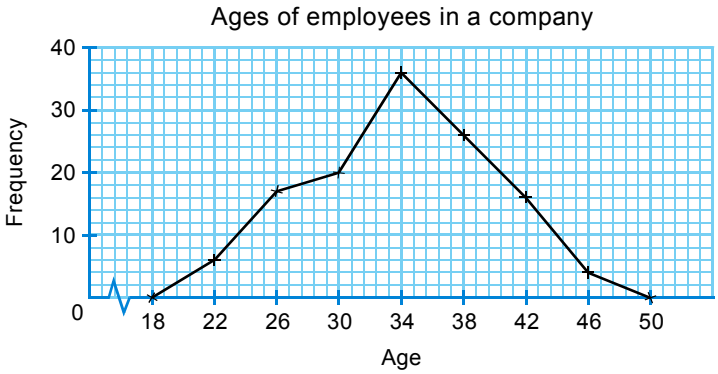
4. The following frequency polygon shows the time required for 100 magical marbles to double their sizes.



How many magical marbles have taken less than 95 s to double their sizes?

A. 32
B. 52
C. 84
D. 91

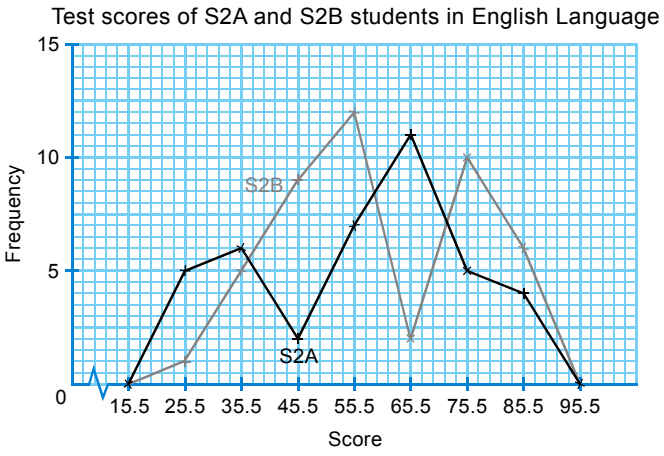
5. The following frequency polygon shows the ages of employees in a company.



What percentage of the employees whose ages are 32 or above?

A. 34.4%
B. 36.8%
C. 65.6%
D. 88%

6. The frequency polygons show the test scores of S2A and S2B students in English Language.

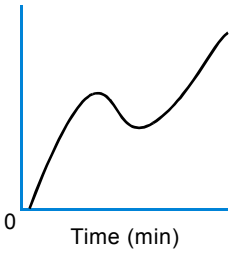


If the pass mark of the test is 60, which class gets a higher pass rate?

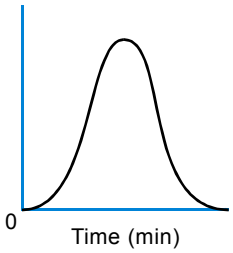
A. S2A
B. S2B
C. The same
D. Cannot be found

7. Which of the following can be a cumulative frequency curve?

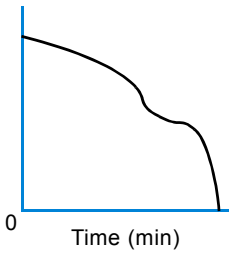
A. Time taken to go to school



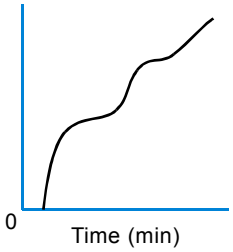
B. Time taken to go to school



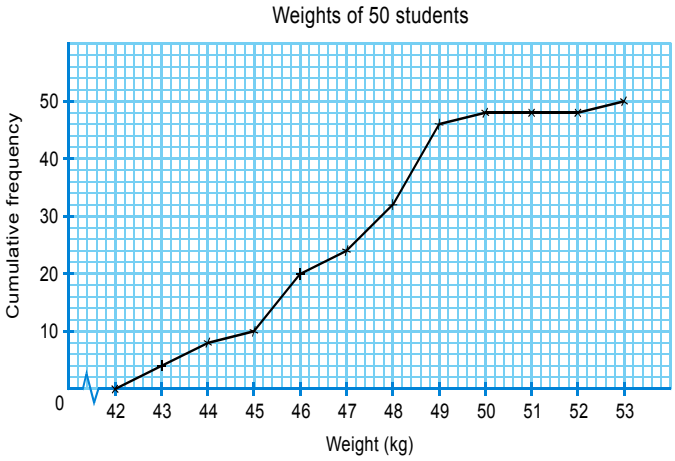
C. Time taken to go to school



D. Time taken to go to school



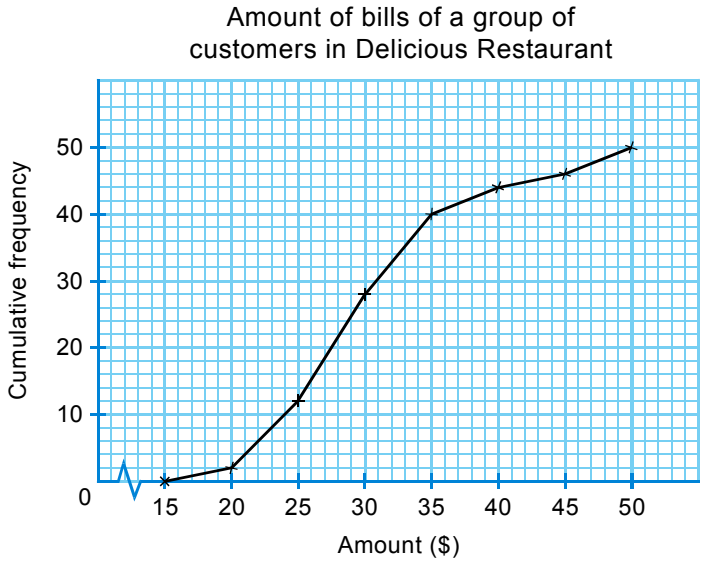
8. The following cumulative frequency polygon shows the weights of 50 students.



Find the number of students whose weights are 49 kg or above.

A. 4
B. 6
C. 46
D. 48

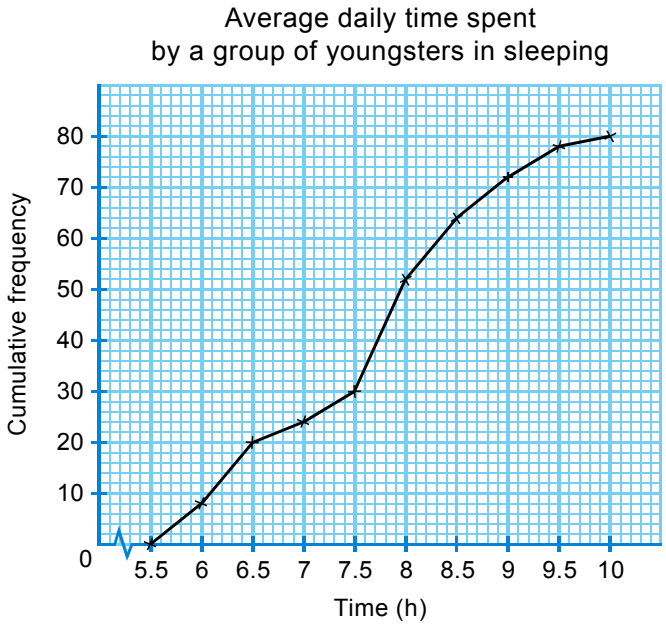
9. The following cumulative frequency polygon shows the amount of bills of a group of customers in Delicious Restaurant.



If a discount will be offered for any bill of $27.5 or above, how many customers cannot get the discount?

A. 20
B. 26
C. 28
D. 30

10. The following cumulative frequency polygon shows the average daily time spent by a group of youngsters in sleeping.



If youngsters who spent 8 h or above in sleeping on average every day will have a better physical condition, find the number of youngsters who have a better physical condition.

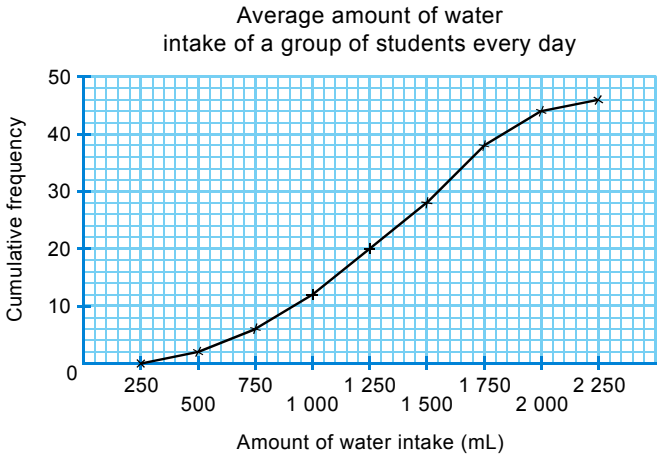
A. 16

B. 28

C. 52

D. 64

11. The following cumulative frequency polygon shows the average amount of water intake of a group of students every day.



If students who drink water of 1 500 mL or above on average every day are regarded as having sufficient amount of water intake, find the percentage of students who have sufficient amount of water intake.

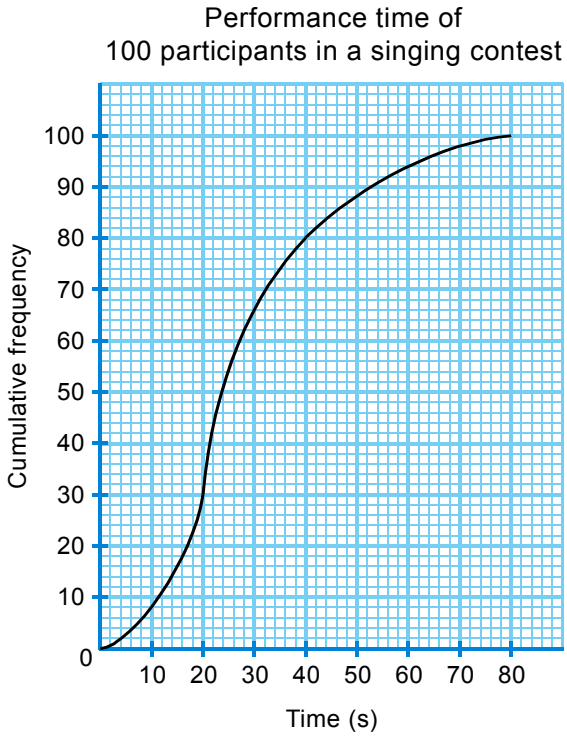
A. $21\frac{17}{23}\%$

B. $39\frac{3}{23}\%$

C. $60\frac{20}{23}\%$

D. $78\frac{6}{23}\%$

12. The following cumulative frequency curve shows the performance time of 100 participants in a singing contest.



If participants with the 6 longest performance time will receive a prize each, find the shortest performance time among these participants.

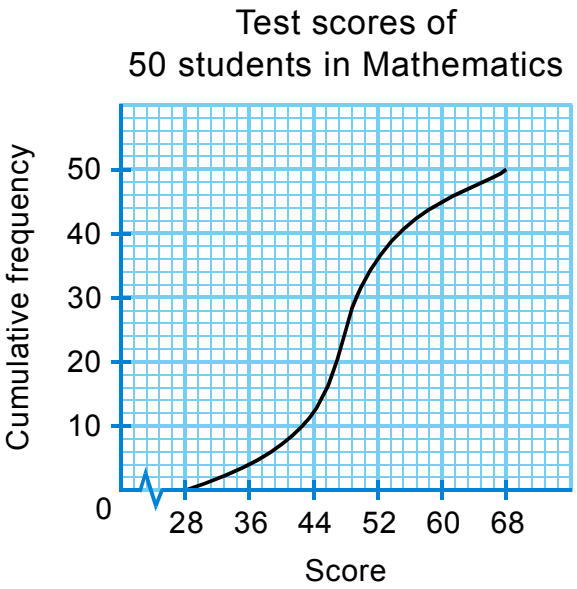
A. 60 s

B. 62 s

C. 64 s

D. 66 s

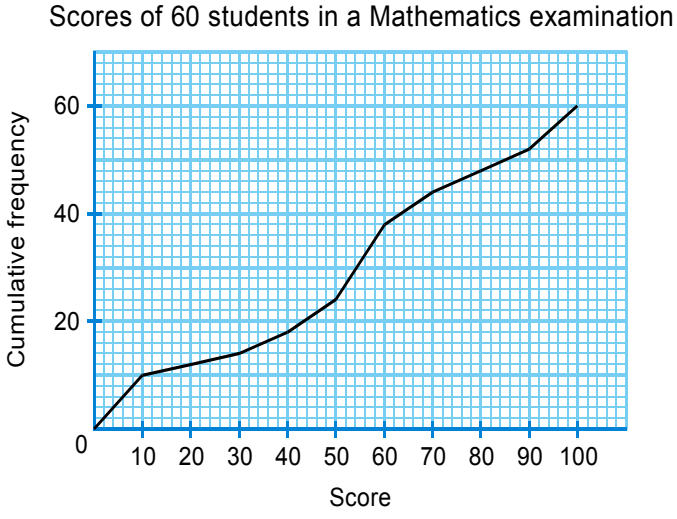
13. The following cumulative frequency curve shows the test scores of 50 students in Mathematics.



If 50% of students fail in the test, what is the pass mark?

A. 37
B. 42.5
C. 48
D. 50

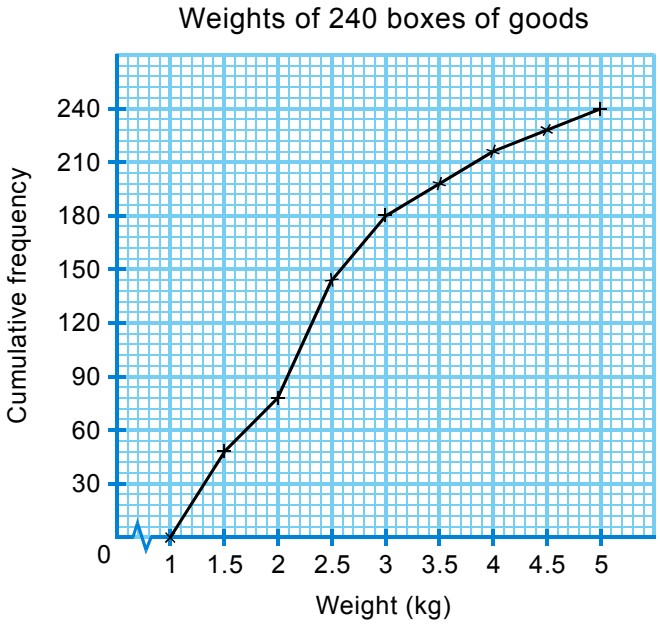
14. The following cumulative frequency polygon shows the scores of 60 students in a Mathematics examination.



Find the median.

A. 45
B. 50
C. 52
D. 54

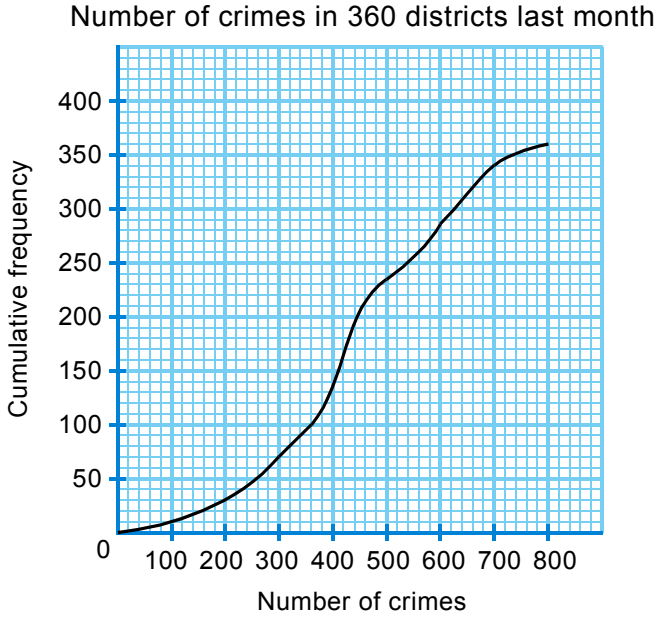
15. The following cumulative frequency polygon shows the weights of 240 boxes of goods.



Find the lower quartile.

A. 1.7 kg
B. 2.3 kg
C. 3 kg
D. 4 kg

16. The following cumulative frequency curve shows the number of crimes in 360 districts last month.



Find the upper quartile.

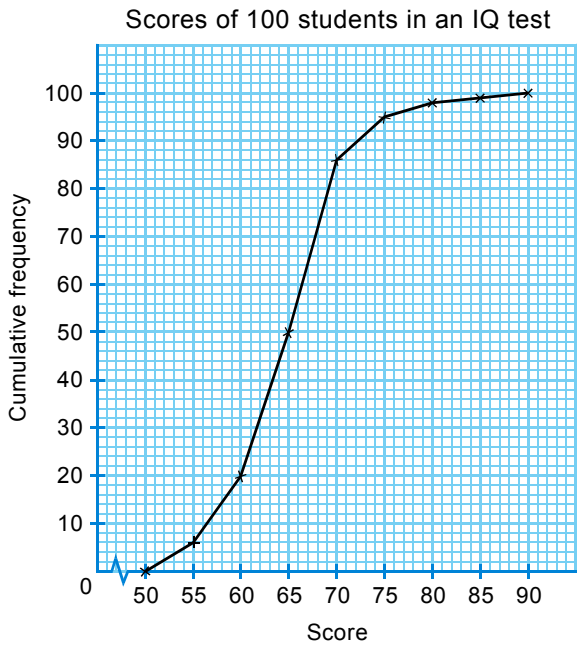
A. 340

B. 360

C. 580

D. 630

17. The following cumulative frequency polygon shows the scores of 100 students in an IQ test.



Find P_{44}.

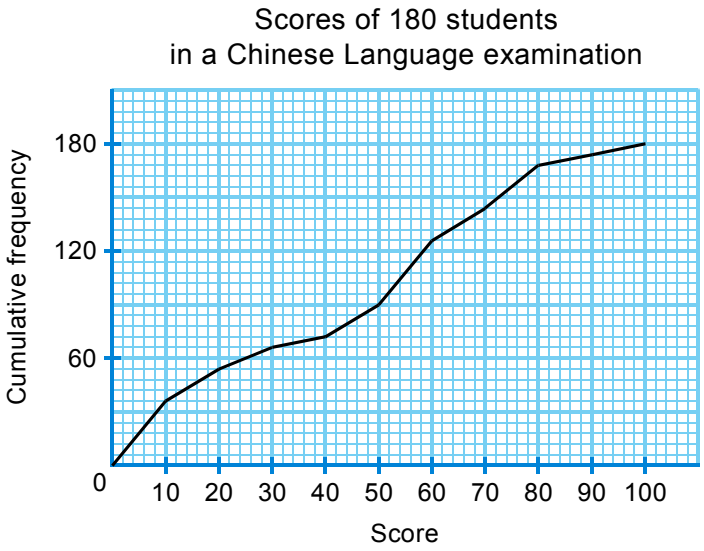
A. 62

B. 64

C. 66

D. 68

18. The following cumulative frequency polygon shows the scores of 180 students in a Chinese Language examination.



Find P_{20} and P_{80}.

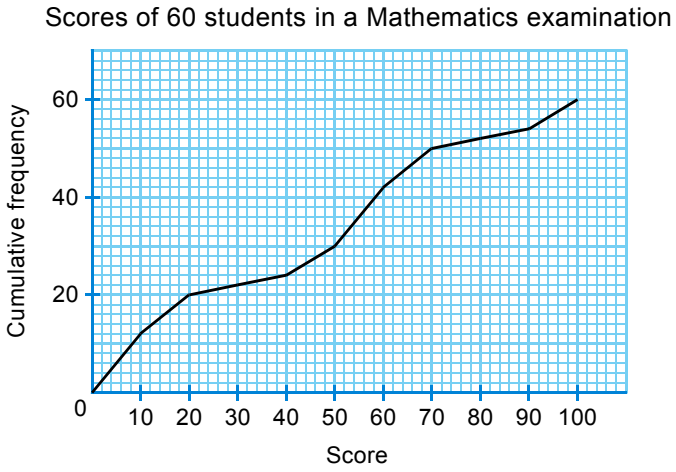
A. $P_{20} = 10,\ P_{80} = 70$

B. $P_{20} = 15,\ P_{80} = 65$

C. $P_{20} = 30,\ P_{80} = 75$

D. $P_{20} = 40,\ P_{80} = 30$

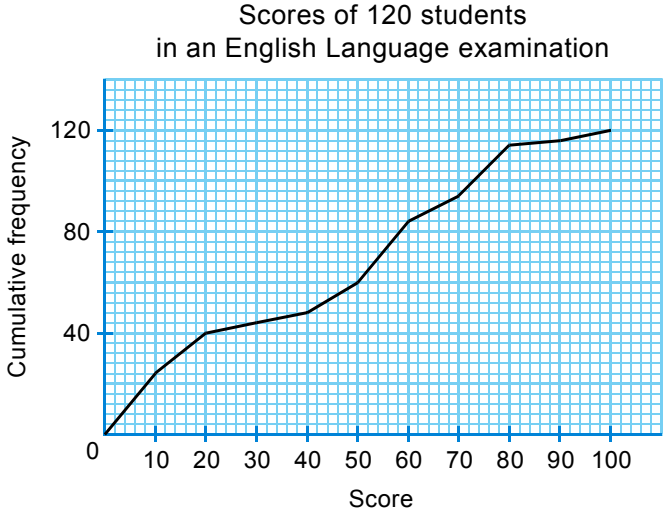
19. The following cumulative frequency polygon shows the scores of 60 students in a Mathematics examination.



Find the difference between the upper quartile and lower quartile.

A. 37
B. 48
C. 49
D. 50

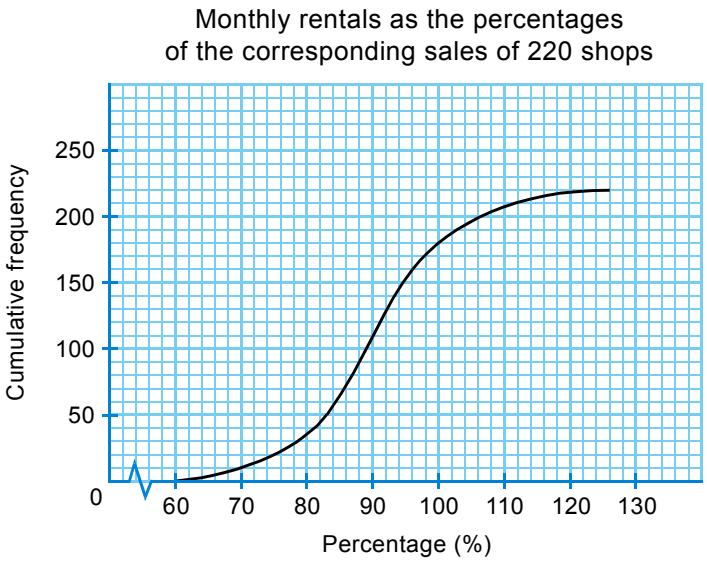
20. The following cumulative frequency polygon shows the scores of 120 students in an English Language examination.



If students with scores of P_{85} or above will receive a prize each, what is the minimum score among these students?

A. 7
B. 14
C. 65
D. 74

21. The following cumulative frequency curve shows the monthly rentals as the percentages of the corresponding sales of 220 shops.



If the monthly rental of Charile Restaurant is \$153 000 and its monthly rental as the percentage of its sales is the median, find the sales of Charile Restaurant.

A. \$137 700
B. \$140 760
C. \$153 000
D. \$170 000