Year 6 maths: Pie graphs and line graphs: fractions, percents and change (Medium)

Maths · Data
Level: Medium

Student: _____ Date: _____

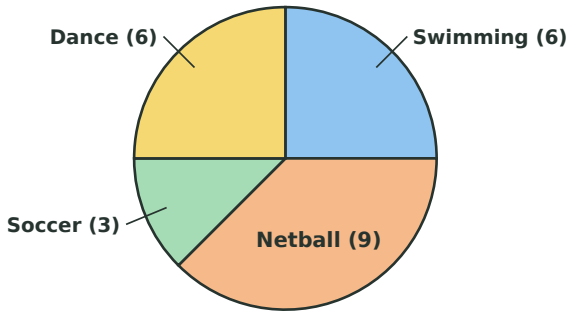
Instructions
- There are 10 questions. Read each one carefully.
- Write your answers on this paper. Use the space under a question to work it out.
- A grown-up can read a question aloud — that's fine.
- The answers are at the end. Check them together when you have finished.

Questions

1. What fraction of the 24 students chose Swimming?

Circle one answer.

Clubs chosen by 24 students

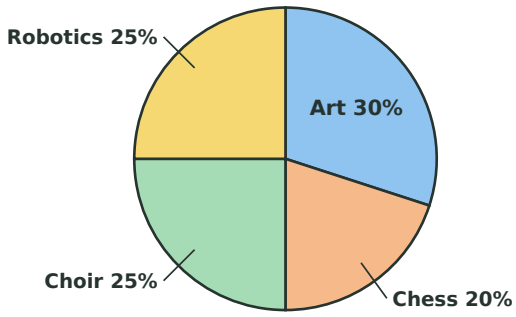


○ **A** 1/6 ○ **B** 6/18 ○ **C** 1/4

2. 150 students joined a club. How many joined Art?

Answer: ☐ students

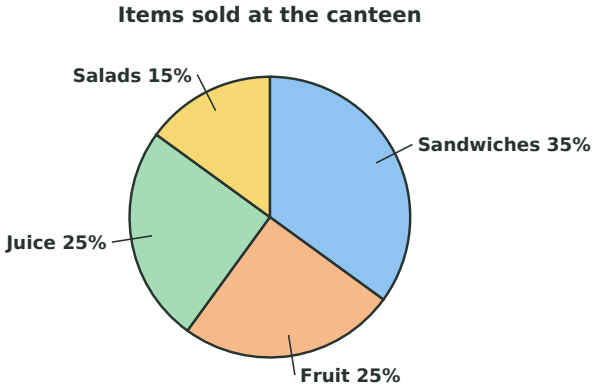
Lunchtime clubs joined by 150 students



Working:

3. The canteen sold 240 items. How many were sandwiches?

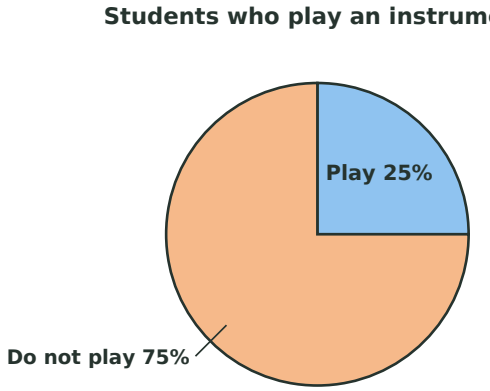
Answer: ☐ items



Working:

4. 25% of the students play an instrument. That is 18 students. How many students are there altogether?

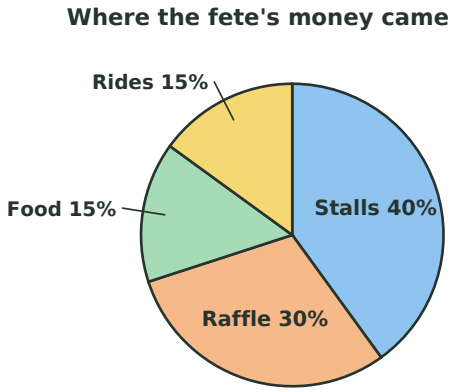
Answer: ☐ students



Working:

5. Which sector is exactly double the Rides sector?

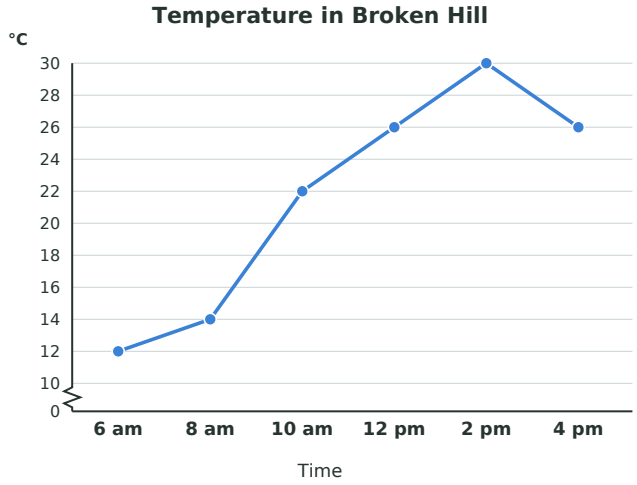
Circle one answer.



○ **A** Raffle ○ **B** Food ○ **C** Stalls

6. What was the temperature at 2 pm? The side starts at 10.

Circle one answer.

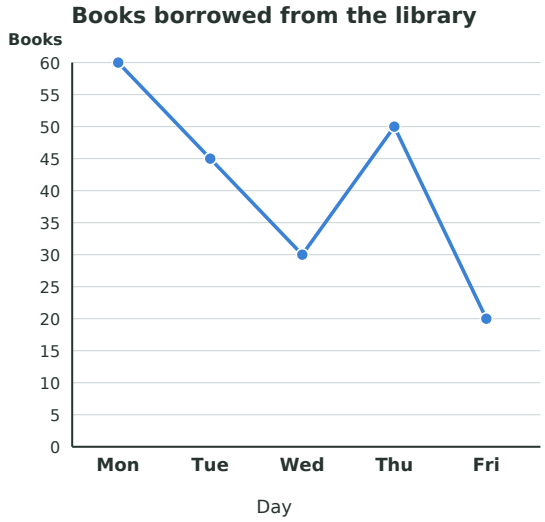


○ **A** 10 °C ○ **B** 26 °C ○ **C** 30 °C

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7. How many fewer books were borrowed on Friday than on Wednesday?

Answer: _____ books

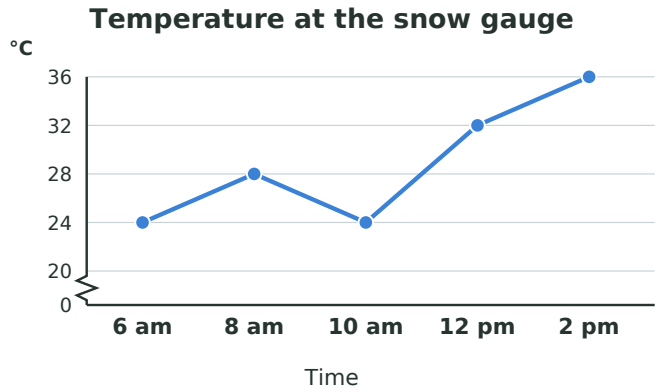


Working:

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8. At which two times was the temperature 24 °C?

Circle one answer.

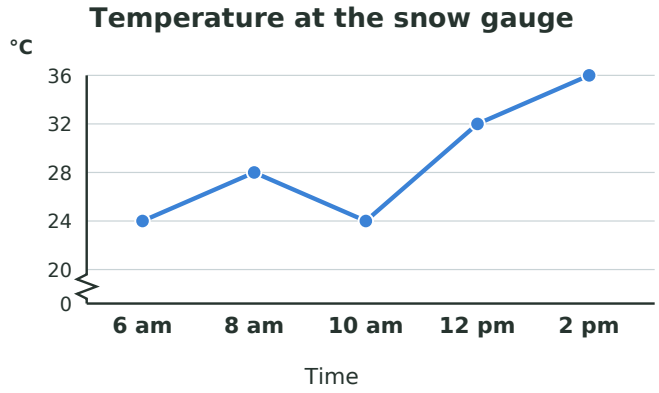


○ **A** 6 am and 8 am ○ **B** 6 am and 10 am ○ **C** 8 am and 12 pm

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9. How many degrees warmer was it at 2 pm than at 6 am?

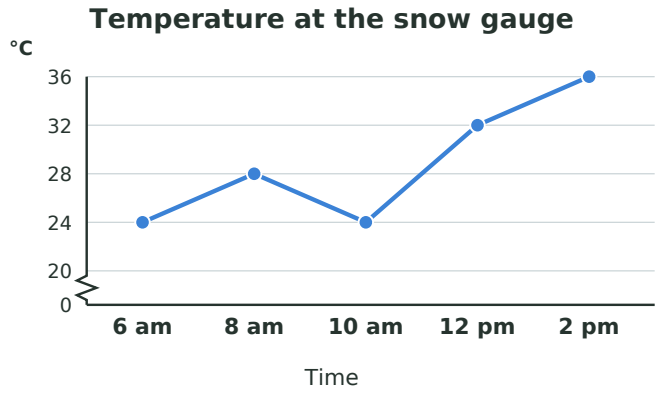
Answer: ☐ degrees



Working:

10. Which statement does the graph support?

Circle one answer.



○ **A** The temperature rose every hour.

○ **B** The temperature will reach 40 °C tomorrow.

○ **C** The temperature at 10 am was the same as at 6 am.

Answer key

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1. C — 1/4
6 out of 24 is 6/24, which is 1/4 in simplest form.

2. 45 students
30% is 3/10. 150 ÷ 10 = 15, and 3 × 15 = 45.

3. 84 items
10% of 240 is 24, so 5% is 12. 35% is 3 × 24 + 12 = 84.

4. 72 students
25% is 1/4 of the group, so one quarter is 18 students. All 4 quarters: 4 × 18 = 72.

5. A — Raffle
Rides is 15%, and double 15% is 30%. Raffle is 30%.

6. C — 30 °C
The lines go up in 2s from 10. The 2 pm dot is on the 30 line.

7. 10 books
Wednesday is 30 and Friday is 20: 30 − 20 = 10 books.

8. B — 6 am and 10 am
The dots at 6 am and 10 am are both on the 24 line.

9. 12 degrees
2 pm is 36 °C and 6 am is 24 °C: 36 − 24 = 12 degrees.

10. C — The temperature at 10 am was the same as at 6 am.
Both dots are on the 24 line. The graph shows only today's readings, and the line fell between 8 am and 10 am.