

Graphs & Data

Data & Measurement · Grade 5

Score: _____ / 10

★ Hard · 10 Questions

Solve each problem. Show your work in the space provided. Write your answer on the line.

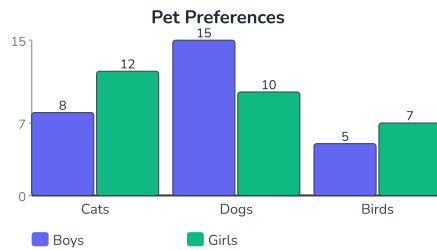
1. A double bar graph compares boys and girls:

Cats — Boys: 8, Girls: 12

Dogs — Boys: 15, Girls: 10

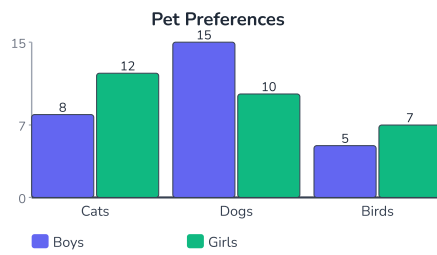
Birds — Boys: 5, Girls: 7

How many more girls prefer cats than boys prefer cats?



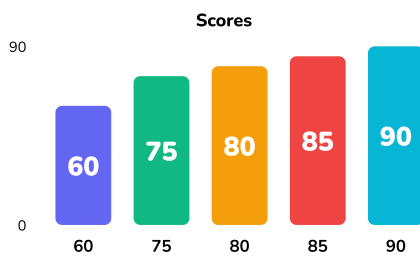
Answer: _____

2. Using the same double bar graph (total above):
Which pet has the largest overall total?



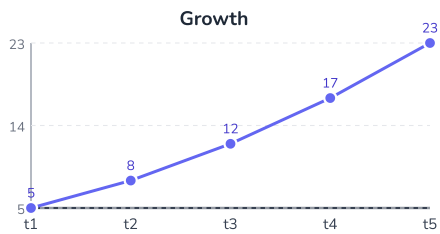
Answer: _____

3. Bar chart: scores 60, 75, 80, 85, 90.
Find the mean.



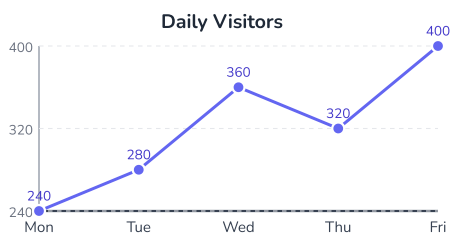
Answer: _____

4. Line graph shows growth: 5, 8, 12, 17, 23.
What is the largest single increase?



Answer: _____

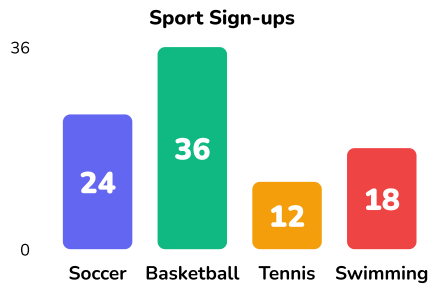
5. Line graph shows daily store visitors: Mon 240, Tue 280, Wed 360, Thu 320, Fri 400.
What is the mean number of visitors per day?



Answer: _____

6. Bar graph: Sport club sign-ups — Soccer 24, Basketball 36, Tennis 12, Swimming 18.

What fraction (in simplest form) chose Soccer?



Answer: _____

7. Bar chart: A=15, B=25, C=30, D=20, E=10.

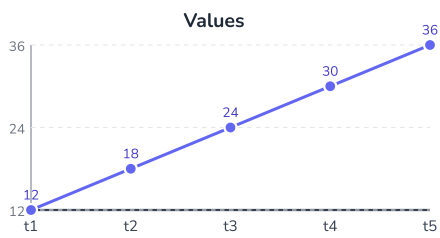
Find the median.



Answer: _____

8. Line graph: 12, 18, 24, 30, 36.

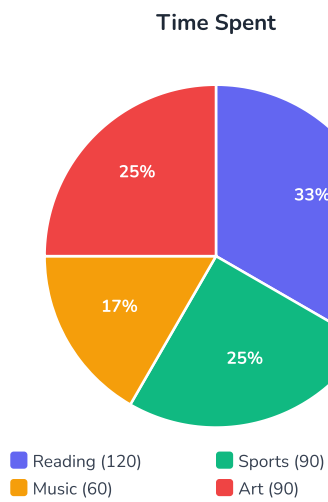
What is the constant rate of change per step?



Answer: _____

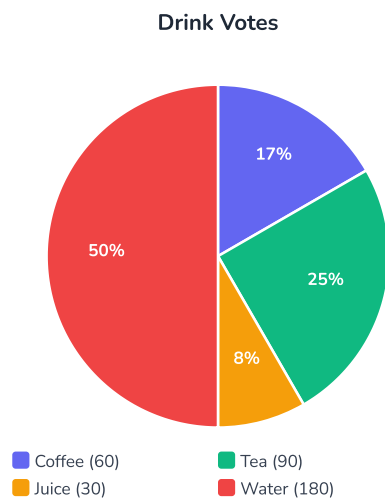
9. Pie chart: Reading=120°, Sports=90°, Music=60°, Art=90° (total 360°).

What fraction read?



Answer: _____

10. Survey: 240 votes. Pie chart shows Coffee 60° , Tea 90° , Juice 30° , Water 180° .
How many voted for Coffee? ($180^\circ = \text{half}$, $60^\circ = 1/6$)



Answer: _____

Answer Key

Graphs & Data — Hard

1. 4 more girls

Girls: 12, Boys: 8. Difference: $12 - 8 = 4$ more girls prefer cats.

2. Dogs: $15 + 10 = 25$ total

Cats: $8 + 12 = 20$. Dogs: $15 + 10 = 25$. Birds: $5 + 7 = 12$. Dogs have the largest total.

3. 78

$(60 + 75 + 80 + 85 + 90) \div 5 = 390 \div 5 = 78$.

4. 6 (between 17 and 23)

Differences: 3, 4, 5, 6. Largest: 6.

5. 320 visitors

Sum: $240 + 280 + 360 + 320 + 400 = 1600$. Mean: $1600 \div 5 = 320$.

6. $4/15$

Total: $24 + 36 + 12 + 18 = 90$. Soccer fraction: $24/90 = 4/15$.

7. 20

Sort: 10, 15, 20, 25, 30. Middle = 20.

8. 6

Each step increases by 6 ($18 - 12 = 6$, $24 - 18 = 6$, etc.).

9. $120/360 = 1/3$

120° out of $360^\circ = 1/3$.

10. 40 votes

$60/360 = 1/6$. $1/6$ of 240 = 40.