

الرياضيات

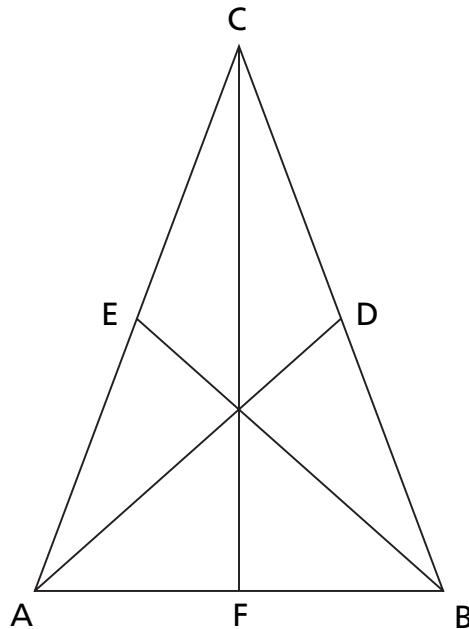
الأسئلة المعلنه للعام الدراسي 2010

9

1

In the diagram, $AC = BC$ and $AC > AB$.

D, E, and F are the midpoints of BC, AC, and AB, respectively.



Which statement is true of lines AD, BE, and CF?

- AD, BE, and CF are lines of reflection in the diagram.
- Only AD and BE are lines of reflection in the diagram.
- Only CF is a line of reflection in the diagram.
- There are no lines of reflection shown in the diagram.

Key: 3

Strand: Geometry and measures

Standard: 05.6 Identify a single transformation mapping a 2-D shape onto its image: reflecti...

DOK: 01 Understanding

2

Factor:

$$x^2 + 6x + 9$$

$(x - 3)^2$

$(x + 3)^2$

$(3x - 3)(x + 3)$

$(3x + 3)(x + 3)$

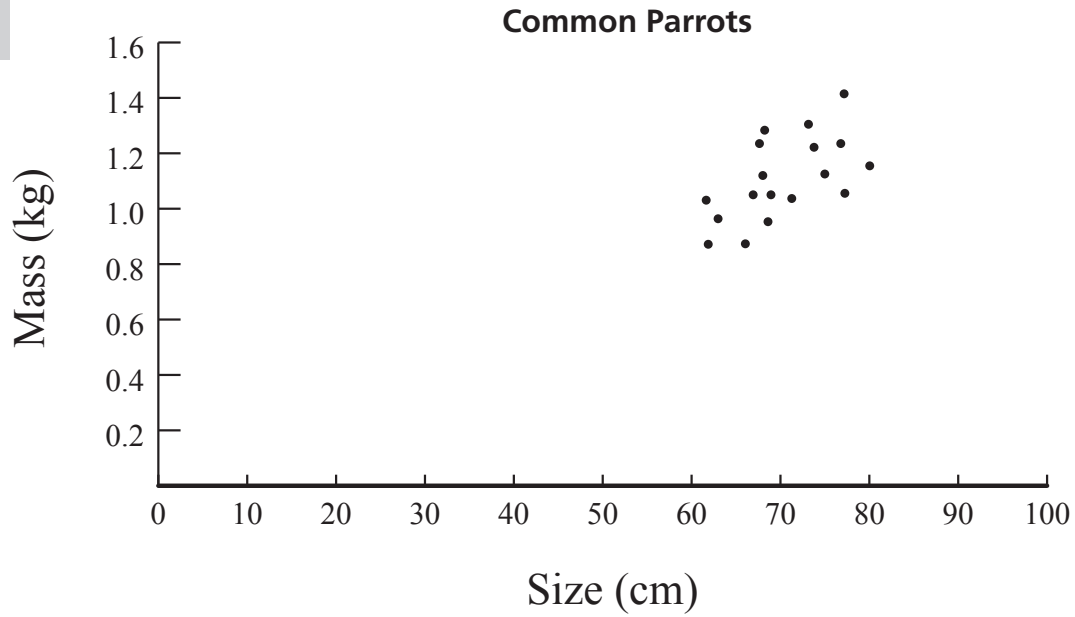
Key: 2

Strand: Number and algebra

Standard: 03.3 Factorise algebraic expressions: by removing common factors from expressions ...

DOK: 01 Understanding

3



Which of the following questions can be answered by the scatter diagram?

- What is the heaviest parrot in the world?
- What is the typical mass/size ratio for a parrot?
- How much does a parrot typically eat?
- How large do most parrots grow?

Key: 2

Strand: Data handling

Standard: 08.1 Identify questions or problems that can be answered or solved by collecting, ...

DOK: 01 Understanding

Simplify:

$$2(x - 4) - 3(1 - 2x)$$

Show your work here.

Answer: _____

Work Shown: $2(x - 4) - 3(1 - 2x) =$ $2x - 8 - 3 + 6x =$ $8x - 11$	
Answer: $8x - 11$	
Correct work shown AND correct answer	2 pts
Work shown may have minor errors OR correct answer only	1 pt
Response is incomplete or irrelevant	0 pts
No response	Blank

Points: 2

Strand: Number and algebra

Standard: 03.1 Expand expressions of the form $a(x \pm b)$, $(x + a)$, $(x - a)$, $(x + a)(x - a)$, ...

DOK: 01 Understanding

The table shows the number of students enrolled in one of four college programs. Each student enrolls in only one program.

Program	Number of Students
Education	125
Language	72
Science	84
Business	195

What is the mean number of students enrolled in a program?

Answer: _____

What is the median number of students enrolled in a program?

Answer: _____

		Answer: A. Mean: 119 B. Median: 104.5
2 correct answers		2 pts
1 correct answer		1 pt
Response is incomplete or irrelevant		0 pts
No response		Blank

Points: 2

Strand: Data handling

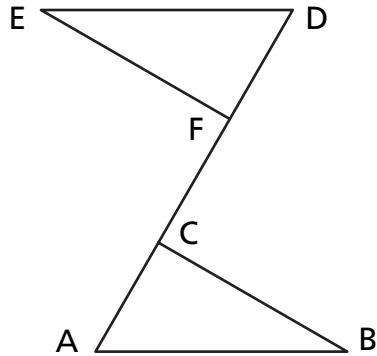
Standard: 08.3 Calculate the mean, range and median of small sets of discrete or continuous ...

DOK: 02 Application

In the diagram, triangle ABC is congruent to triangle DEF.

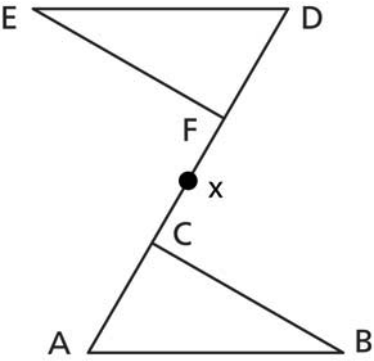
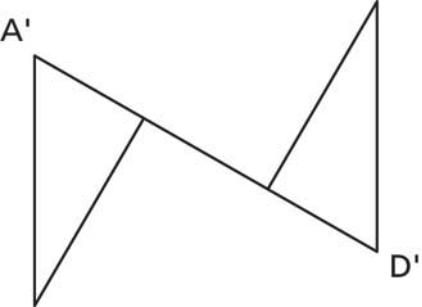
The figure can be rotated so that triangle ABC switches places with triangle DEF.

Mark the center of rotation as x .



Draw the image that results when the figure is rotated 90° clockwise about x . In your diagram, label the image of point A as A' and the image of point D as D' .

Draw your figure here.

<p style="text-align: right;">Answer: (original)</p>  <p style="text-align: right;">(new)</p> 	
Correct drawing and labels	2 pts
Correct rotation with error in labels	1 pt
Response is incomplete or irrelevant	0 pts
No response	Blank

Points: 2

Strand: Geometry and measures

Standard: 05.6 Identify a single transformation mapping a 2-D shape onto its image: reflecti...

DOK: 02 Application