

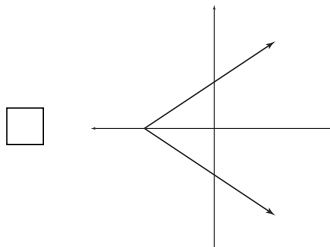
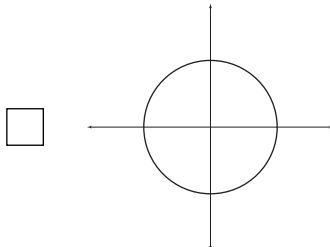
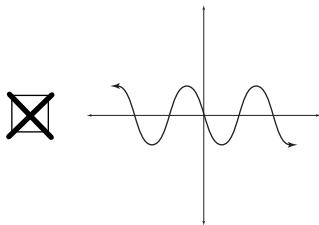
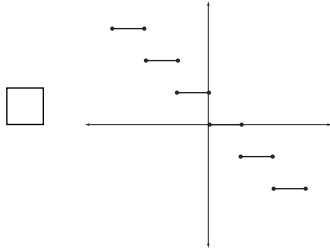
الرياضيات

الأسئلة المعلنه للعام الدراسي 2010

10

1

Which of the following graphs represents a function?



Key: 2

Strand: Number and algebra

Standard: 05.5 Recognise when a graph represents a functional relationship between two varia...

DOK: 02 Application

2

Which of the following represents continuous quantitative data?

- the color of olive oil
- the temperature of heated glass
- the number of pages in a magazine
- the number of people on a soccer team

Key: 2

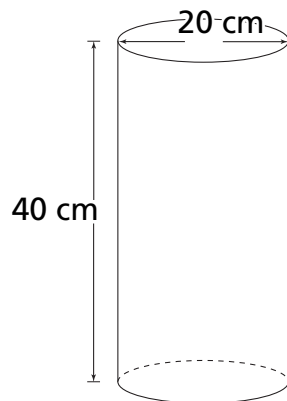
Strand: Probability and statistics

Standard: 08.1 Know that different types of data can be collected from samples - qualitative...

DOK: 02 Application

3

What is the surface area of the cylindrical storage container shown below?



- $500\pi \text{ cm}^2$
- $900\pi \text{ cm}^2$
- $1,000\pi \text{ cm}^2$
- $1,800\pi \text{ cm}^2$

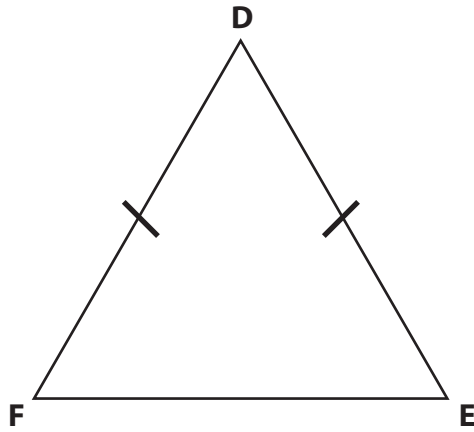
Key: 3

Strand: Geometry and measures

Standard: 07.1 Use formulae to calculate: the circumference and area of a circle; the perime...

DOK: 02 Application

In isosceles triangle DEF, $DF = DE$.

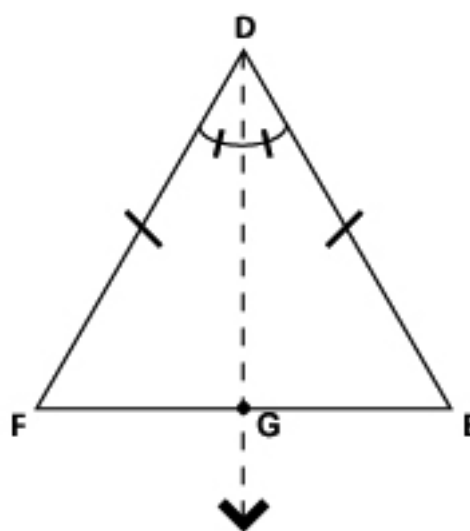


Prove that $\angle F \cong \angle E$. Show your work in the box below.

Answer:

It is given that $DF = DE$.

Draw an angle bisector \overline{DG} .



$\angle FDG \cong \angle EDG$ definition of an angle bisector

$DG = DG$ reflexive property

$\triangle FDG \cong \triangle EDG$ side-angle-side congruence

$\angle F \cong \angle E$ corresponding parts of congruent triangles are congruent.

(or other valid response)

Complete and accurate proof or explanation showing both angles are congruent

3 pts

One element of the proof or explanation is missing or is incorrect

2 pts

Two elements of the proof or explanation are missing or are incorrect	1 pt
Response is incomplete or irrelevant	0 pts
No response	Blank

Points: 3

Strand: Geometry and measures

Standard: 06.2 Establish the congruency of two triangles to generate further knowledge and t...

DOK: 02 Application

Look at the sets.

$A = \{\text{all students in Huda's school}\}$

$B = \{\text{age of each student}\}$

$C = \{\text{all books that students have read}\}$

$D = \{\text{day of the week each student was born on}\}$

Consider the mappings:

A to B

A to C

A to D

Explain whether or not each mapping is a function. Explain your answer.

Answer: _____

Answer:

A maps to *B* as a function AND

Each person in set *A* maps to exactly one value in set *B*. Each student can only be one age.

A does not map to *C* as a function AND

Each person in set *A* could map to more than one value in set *C*. A student is likely to have read more than one book.

A maps to *D* as a function AND

Each person in set *A* maps to exactly one value in set *D*. Each student was born on only one day of the week.

Key Elements:

- 1 for identifying that *A* to *B* is a function AND giving a reasonable explanation
- 1 for identifying that *A* to *C* is not a function AND giving a reasonable explanation
- 1 for identifying that *A* to *D* is a function AND giving a reasonable explanation

3 key elements or 5-6 parts	3 pts
2 key elements or 3-4 parts	2 pts
1 key element or 1-2 parts	1 pt
Response is incomplete or irrelevant	0 pts
No response	Blank

Points: 3

Strand: Number and algebra

Standard: 05.1 Use function notation; investigate a range of mathematical and physical situa...

DOK: 02 Application

In the annual budget of a business, 40% of the expenses are for advertising. Of the advertising expenses, 30% is for web advertising, 45% is for television advertising, and 25% is for radio advertising.

What percentage of the business's total expenses will be spent on web advertising? Show your work in the box below.

Answer: _____

If the company budgets QR 2 million for all forms of advertising, what is the total budget? Show your work in the box below.

Answer: _____

<p>A. Work Shown: Percent for Web Advertising: 30% of 40% = $(0.30)(0.40) = 0.12 = 12\%$</p> <p>Answer: 12%</p> <p>B. Work Shown: 2,000,000 QR = 40% of total expenses Let T= total expenses Then 2,000,000 QR = 0.40T $T = 2,000,000 \text{ QR} \div 0.40 = 5,000,000 \text{ QR}$</p> <p>Answer: 5,000,000 QR</p> <p>Key Elements:</p> <ul style="list-style-type: none"> • 1 for correct percent (12%) • 1 for correct Work Shown to find percent <ul style="list-style-type: none"> • 1 for correct budget (5,000,000) • 1 for correct Work Shown to find the budget 	
4 key elements	3 pts
3 key elements	2 pts
1-2 key elements	1 pt
Incorrect or irrelevant response	0 pts
No response	Blank

Points: 3

Strand: Number and algebra

Standard: 03.7 Perform percentage calculations, including finding a percentage of a percent...