United Arab Emirates
Ministry of Education

الإمارات العربية المتحدة
وزارة التربية والتعليم

عام التسامح

Grade 8 Mathematics

Term 3 Revision

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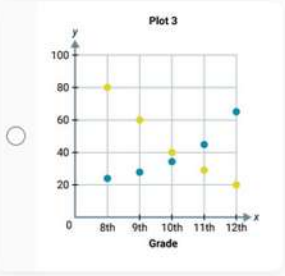
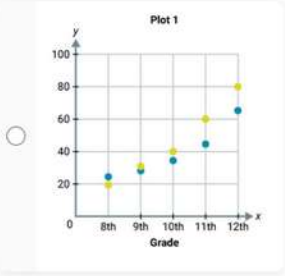
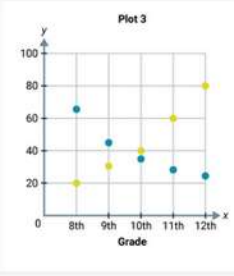
(2)

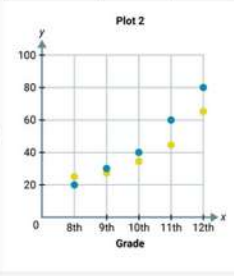
The number of boys and girls in different grades of a school are given in the table. Pick the appropriate scatter plot for the data. The yellow colored star points in the scatter plot represent the number of boys and the blue colored star points represent the number of girls in each grade.

Grades	Boys	Girls
8^{th}	20	25
9^{th}	30	28
10^{th}	40	35
11^{th}	60	45
12^{th}	80	65









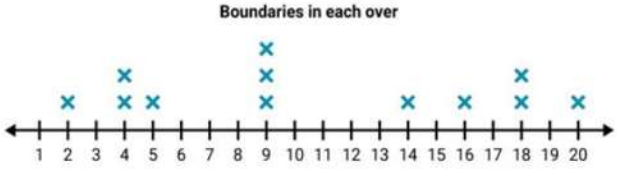
The table shows the cost (in AED) of 5 different brands of footballs.

7	9	11	13	15

What is the mean absolute deviation of the costs?

- 11
- 3.2
- 0.2
- 2.4

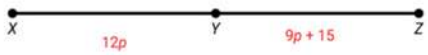
The graph shown gives the number of boundaries in each over in a cricket match. What is the center of the distribution?



- 10
- 4
- 9
- 18

Given: Y is the midpoint of $\overline{XZ}$. $XY = 12p$, and $YZ = 9p + 15$.

Prove: $p = 5$

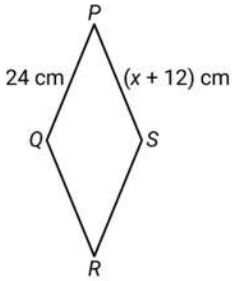


Statements	Reasons
1. Y is the midpoint of $\overline{XZ}$. $XY = 12p$, and $YZ = 9p + 15$.	1. Given
2. $\overline{XY} \cong \overline{YZ}$	2. .....
3. $XY = YZ$	3. Definition of congruent segments
4. $12p = 9p + 15$	4. Substitution
5. $3p = 15$	5. Subtraction property of equality
6. $p = 5$	6. Division property of equality

What is the missing reason?

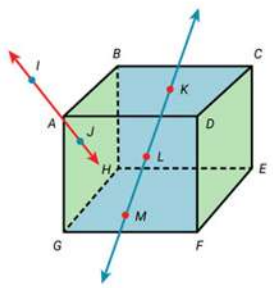
- ○ Transitive property of congruence
- ○ Segment addition postulate
- ○ Definition of midpoint
- ○ Subtraction property of equality

$PQRS$ is a rhombus. If $PQ = 24$ cm and $PS = (x + 12)$ cm, find the value of x.



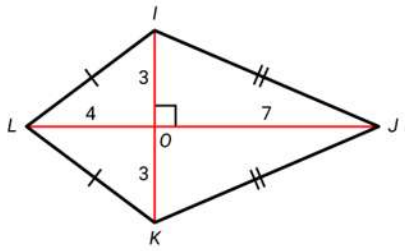
- ○ 12
- ○ 24
- ○ 36
- ○ 6

Look at the figure. Which line is the intersection of planes *ADF* and *CDF*?



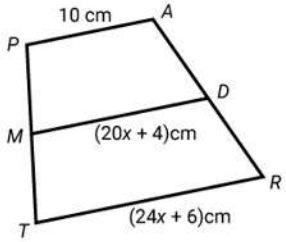
- ○ $\overleftrightarrow{HE}$
- ○ $\overleftrightarrow{DF}$
- ○ $\overleftrightarrow{FE}$
- ○ $\overleftrightarrow{FG}$

In kite *IJKL*, the diagonals intersect at *O*. Find the length of $\overline{IJ}$.



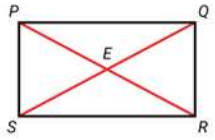
- ○ $\sqrt{29}$
- ○ 29
- ○ 58
- ○ $\sqrt{58}$

Figure *PART* is a trapezoid. The measures of its bases and midsegment are shown. What is the length of $\overline{TR}$?



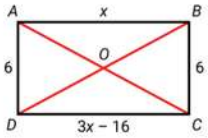
- ○ 0.5 cm
- ○ 18 cm
- ○ 20 cm
- ○ 10 cm

PQRS is a rectangle with diagonals $\overline{PR}$ and $\overline{QS}$. $PR = 2x + 1$ and $QS = x + 3$. Find QE.



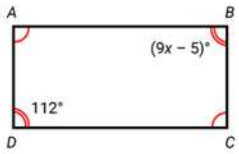
- 1.5
- 4.5
- 2.5
- 3.5

ABCD is a rectangle. What is the length of $\overline{AB}$?



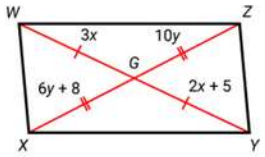
- 16
- 24
- 10
- 8

$\angle A \cong \angle C$. For what value of x is *ABCD* a parallelogram?



- 6
- 14
- 13
- 9

The diagonals of *WXYZ* intersect at *G*. What are the values of *x* and *y* that make *WXYZ* a parallelogram?

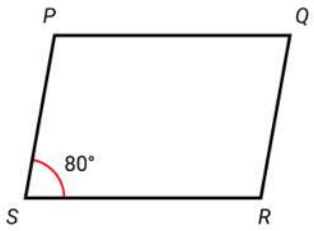


- ○ $x=2$ and $y=5$
- ○ $x=5$ and $y=4$
- ○ $x=3$ and $y=4$
- ○ $x=5$ and $y=2$

The vertices of parallelogram *ABCD* are *A*(-6, 5), *B*(-1, 10), *C*(2, 0) and *D*(-3, -5) . Find the coordinates of the point of intersection of the diagonals.

- ○ (-2, 7.5)
- ○ (4, 15)
- ○ (-2, 2.5)
- ○ (-5.5, 7.5)

In parallelogram *PQRS*, the measure of $\angle S = 80°$. Find the measure of $\angle Q$.



- ○ 180°
- ○ 80°
- ○ 120°
- ○ 90°

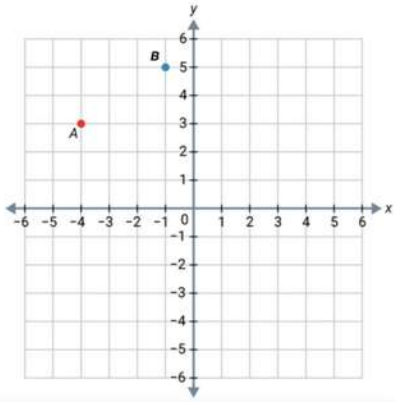
Name the regular polygon whose interior angles measure 90° each.

- ○ heptagon
- ○ triangle
- ○ pentagon
- ○ quadrilateral

Which of the following is the measure of an exterior angle of a 15-sided regular polygon?

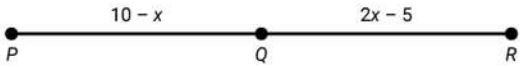
- 24°
- 12°
- 36°
- 40°

Find the coordinates of the midpoint of the line segment *AB*.



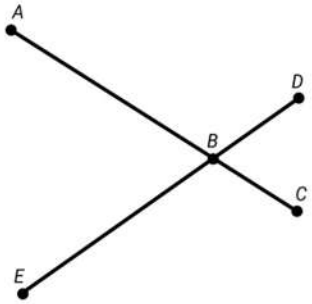
- (-2.5, 4)
- (-1.5, 1)
- (2.5, 4)
- (4, -2.5)

A line segment *PR* with midpoint *Q* is shown. The midpoint of the segment and the distance from the midpoint to each endpoint is labeled. What is the length of segment *PR*?



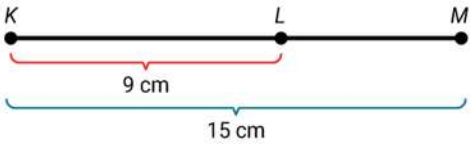
- 12
- 8
- 14
- 10

Line segments AC and ED intersect at B.
If $DE = 15$ cm, $\overline{DB} \cong \overline{CB}$, and $\overline{BE} \cong \overline{BA}$, then Find CA.



- 30 cm
- 7.5 cm
- 15 cm
- 7 cm

K, L, and M are collinear. Find LM if $KL = 9$ cm and $KM = 15$ cm.

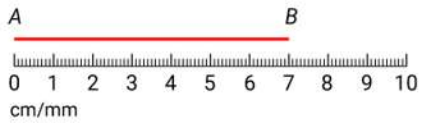


- 15 cm
- 6 cm
- 9 cm
- 24 cm

How many significant digits are in 0.0870?

- 5
- 2
- 4
- 3

Find the absolute error of the measurement of 7 cm.



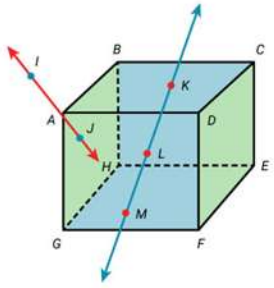
- 0.5 cm
- 0.1 cm
- 0.05 cm
- 0.005 cm

The table shows the scores of a basketball team. The standard deviation of scores is about 4.5. Find the range of values within one standard deviation of the mean.

Basketball Scores				
64	61	67	59	60
58	57	71	56	62

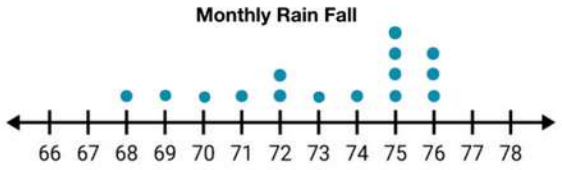
- 50 to 63
- 57 to 66
- 57.3 to 60.7
- 53.7 to 67.7

Look at the figure. Which point is coplanar with *F*, *E*, and *C*?



- *K*
- *D*
- *L*
- *M*

The data shows the measures of monthly rainfall in a country for a year:



Calculate the five-number summary of the data.

- Minimum: 76
  Maximum: 68
  Median: 47
  Lower quartile: 71
  Upper quartile: 75

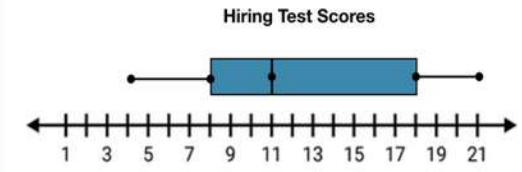
- Minimum: 68
  Maximum: 76
  Median: 74
  Lower quartile: 71
  Upper quartile: 75

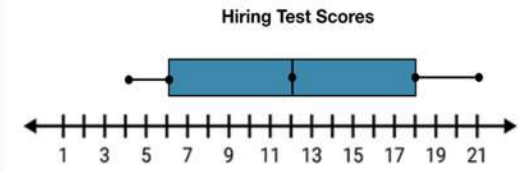
- Minimum: 71
  Maximum: 76
  Median: 68
  Lower quartile: 71
  Upper quartile: 75

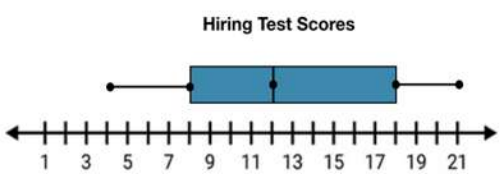
- Minimum: 76
  Maximum: 68
  Median: 75
  Lower quartile: 71
  Upper quartile: 74

A manager hired 7 employees on different roles in his company and their scores in the hiring test are shown in the line plot below

Which box plot represents the represented set of data?

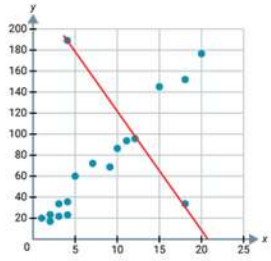




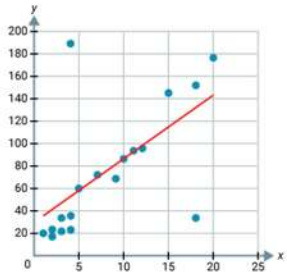


A class teacher gave a scatter plot with the line of best fit to a student and instructed her to identify the appropriate graph that represents the equation of the line of best fit. Select the appropriate graph.

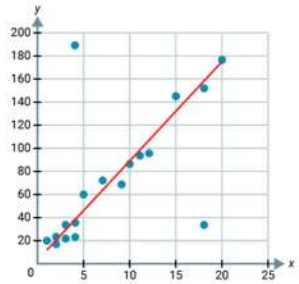
(1)



(2)



(3)



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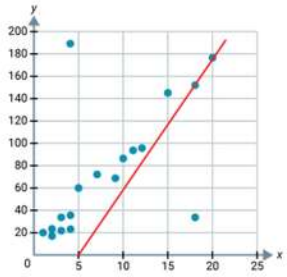
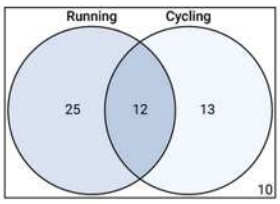


A survey is conducted by a sports company. The data collected is shown in the two-way table.
A relative frequency of 0.71 suggests what type of relationship?

	Running	No running	Total
Cycling	12, $\frac{12}{25} = 0.48$	13, $\frac{13}{25} = 0.52$	25; 1.0
No cycling	25, $\frac{25}{35} \approx 0.71$	10, $\frac{10}{35} \approx 0.29$	35; 1.0
Total	37	23	60

- A relationship is likely to exist between no running and no cycling.
- A relationship is likely to exist between running and no cycling.
- A relationship is likely to exist between running and cycling.
- A relationship is likely to exist between no running and cycling.

A survey is conducted by a sports company.
The data is collected, and shown in the Venn diagram.



Choose the correct two-way table for this Venn diagram?

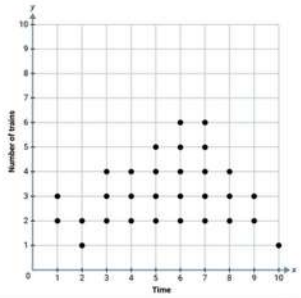
	Running	No running	Total
Cycling	12	10	22
No cycling	25	13	38
Total	37	23	60

	Running	No running	Total
Cycling	10	13	23
No cycling	25	12	37
Total	35	25	60

	Running	No running	Total
Cycling	12	13	25
No cycling	25	10	35
Total	37	23	60

	Running	No running	Total
Cycling	12	13	25
No cycling	10	25	35
Total	22	38	60

A scatter plot for the number of trains operated by a train company at different times of day from 1:00 pm to 10:00 pm is shown. Identify the correct statement.



- Minimum number of trains operated between 6 pm to 8 pm
- Maximum number of trains operate after 9 pm
- Maximum number of trains operate between 1 pm to 2 pm
- Maximum number of trains operated between 5 pm to 7 pm