

# SAMPLE GRADE 9 EQAO TEST

<https://dwod99k06nyqh.cloudfront.net/#/en/test-auth/g9-sample/340/adaptive>

## STAGE 1

### Question 1

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One of these tables of values shows information about a linear relationship between distance and time.

Which table of values shows this relationship?

Time (s)	Distance (m)
1	1
2	3
3	6

Time (s)	Distance (m)
1	1
2	4
3	9

Time (s)	Distance (m)
1	2
2	5
3	8

Time (s)	Distance (m)
1	2
2	4
3	8

## Question 2

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An equation is shown.

$$\frac{(x^5y^4)(x^\square y^3)}{x^2y^2} = x^{10}y^\Delta$$

Select the values that make this equation true:  $\square =$   3 and  $\Delta =$   5

4  6

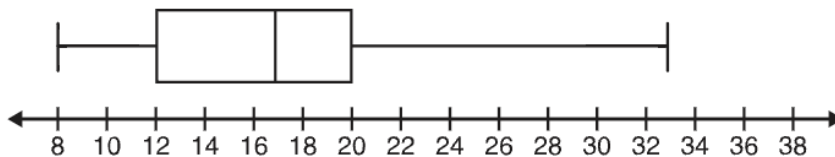
5  9

7  10

## Question 3

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This diagram represents the number of parking tickets issued per month over ten months in a certain town in Ontario.



What is the **difference** between the maximum number of tickets issued and the median of this data?

13 tickets

16 tickets

21 tickets

25 tickets

## Question 4

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If  $y$  represents the number of circles in the figure and  $x$  represents the figure number, what is the equation of this pattern?



Figure 1

Figure 2

Figure 3

$$y = 3x + 6$$

$$y = -3x + 6$$

$$y = 3x + 9$$

$$y = -3x + 9$$

## Question 5

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Feng gets a loan to buy a new computer. Feng's choices will either increase or decrease the total amount of interest paid on the loan.

Choose either **increases** or **decreases** for each choice.

	Increases the interest paid on the loan	Decreases the interest paid on the loan
Choose not to make a down payment on the computer.	<input type="checkbox"/>	<input type="checkbox"/>
Choose an interest rate that compounds weekly versus monthly.	<input type="checkbox"/>	<input type="checkbox"/>
Choose a short repayment time for the loan.	<input type="checkbox"/>	<input type="checkbox"/>

## Question 6

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Which value of  $x$  makes this equation true?

$$5x - 1 = 3x + 9$$

5

4

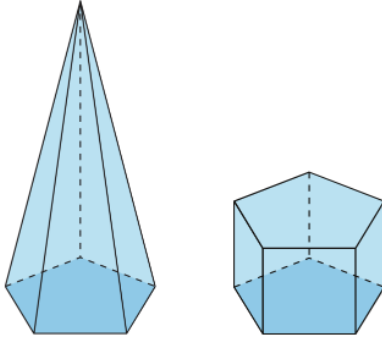
3

1

## Question 7

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This pentagon-based pyramid and this pentagon-based prism have the same volume, and their bases have the same area.



Complete the statement about the height of the pyramid.

The height of the pyramid is ✓ the height of the prism.

- the same as
- two times larger than
- three times larger than
- five times larger than

## Question 8

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This pseudocode asks for two numbers and divides them.

```
output "Enter the first number."
store user input as first
output "Enter the second number."
store user input as second
if second = 0
    output "error"
else
    result = first/second
    output result
```

What is the purpose of the line "if **second** = 0"?

to set the **second** to 0

to multiply the **result** by 2

to make the pseudocode divide by 0 to cause an error

to prevent the pseudocode from dividing by 0 and causing an error

## Question 9

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Drag and drop the missing values so that they are in order from least to greatest.

−20%      −4       $\frac{4}{3}$       60%

Least →  → 0.4 →  → Greatest

## Question 10

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An environmental club at school develops a plan to increase the amount of recycling and decrease the amount of garbage that is collected at the school.

What information is **not** required to develop the club's plan?

the amount of garbage collected

the amount of recycling collected

the number of classrooms in the school

the location and number of recycling bins

## Question 11

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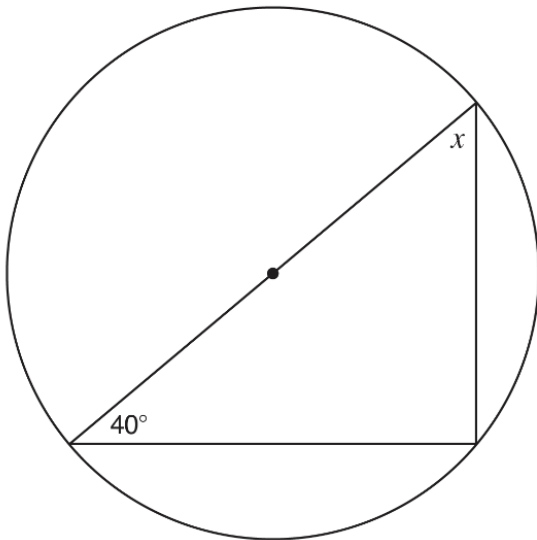
Which **TWO** points can be found in the region defined by  $xy < -3$ ?

<input type="checkbox"/>	(2, -5)	<input type="checkbox"/>	(-2, 5)
<input type="checkbox"/>	(-1, 3)	<input type="checkbox"/>	(1, 3)

## Question 12

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What is the value of  $x$ ?



40°	50°
130°	140°



## Question 13

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What is the value of  $2\frac{1}{4} \times 3\frac{2}{5}$ ?

$7\frac{13}{20}$

$6\frac{13}{20}$

$6\frac{2}{20}$

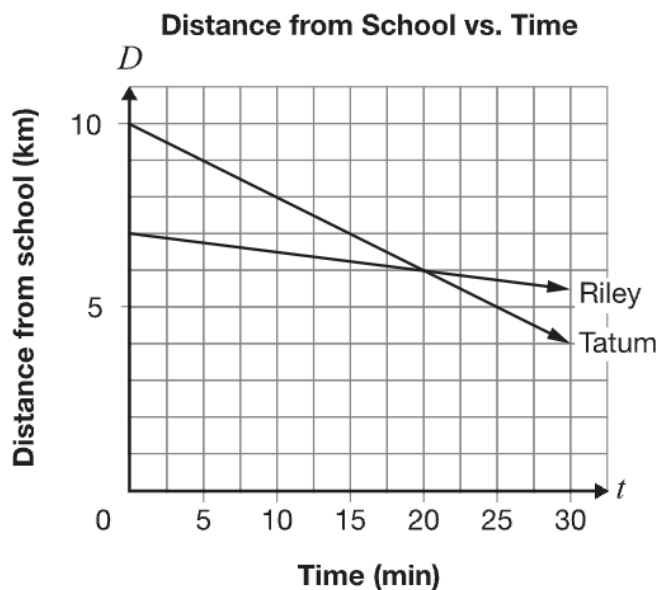
$5\frac{3}{9}$

## Question 14

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Tatum and Riley are both running along the same path.

This graph represents their distances from the school,  $D$ , in kilometres, and their time spent running,  $t$ , in minutes.



After how many minutes of running will Tatum and Riley be the same distance from the school?

3 minutes

6 minutes

20 minutes

30 minutes

## STAGE 2

### Question 1

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The total cost for a cheese pizza is \$14.50, plus \$1.25 for each topping.

Which equation represents the relationship between the total cost,  $C$ , in dollars, and the number of toppings,  $n$ ?

$C = 1.25n$

$C = 15.75n$

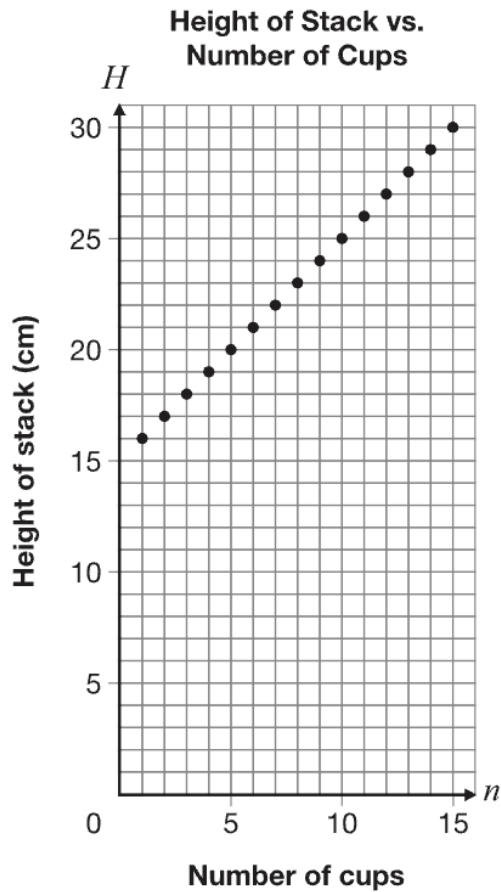
$C = 1.25n + 14.50$

$C = 14.50n + 1.25$

## Question 2

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Paper cups are piled in a stack. This graph shows the relationship between the height of the stack and the number of cups.



Based on this data, what is the height of a stack of 30 cups?

45 cm

60 cm

120 cm

480 cm

### Question 3

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Select the **TWO** numbers that are both a rational number **and** a real number.

<input type="checkbox"/>	$\pi$	<input type="checkbox"/>	$\frac{1}{3}$
<input type="checkbox"/>	$\sqrt{2}$	<input type="checkbox"/>	$-5$

### Question 4

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Yelana creates this budget for the coming month.

Earnings	Expenses
Working at coffee shop: \$195	Transportation: \$120
Tutoring: \$60	Art classes: \$150
	Entertainment: \$65

Which of these changes will make the expenses equal the earnings for this month?

Spend only \$50 on entertainment, and increase her earnings from tutoring to \$90.

Spend only \$80 on transportation, and increase her earnings from tutoring to \$80.

Spend only \$115 on art classes, and increase her earnings at the coffee shop to \$240.

Spend only \$30 on entertainment, and increase her earnings at the coffee shop to \$220.

## Question 5

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Drag and drop each expression into the correct box.

$$2(2x - 4)$$

$$5x - (x + 8)$$

$$4x - 3 - x - 5$$

**Equivalent to  $4x - 8$**

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**Not equivalent to  $4x - 8$**

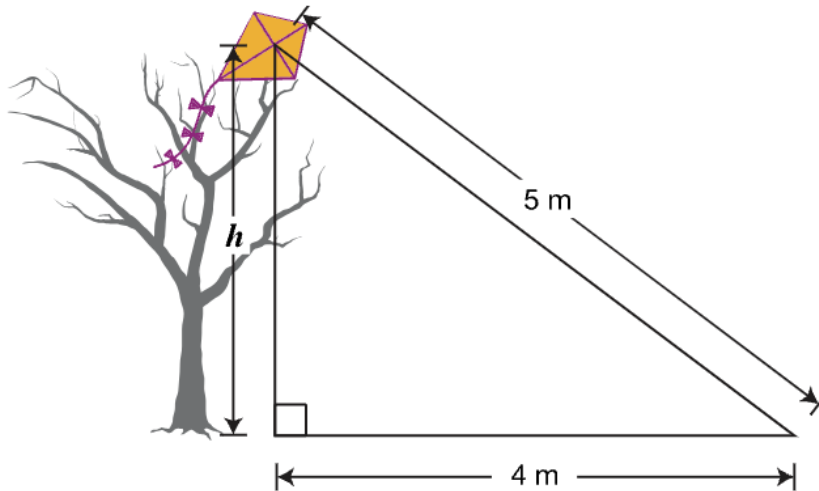
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## Question 6

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A kite is stuck at the top of a tree.

The length of the string, which is attached to the kite and touches the ground, is 5 m.



**Hint:** Remember the side-length relationship for right triangles is  $a^2 + b^2 = c^2$ .

What is the height,  $h$ , of the tree?

1 m

3 m

6 m

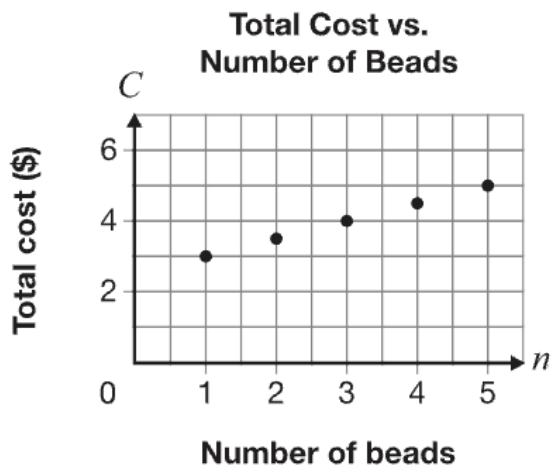
9 m

## Question 7

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The total cost of a bracelet,  $C$ , in dollars, is made up of a cost for the string and a cost per bead,  $n$ .

Information about this linear relation is shown on the graph.



Which option shows only information about this linear relation?

$$C = 2.50 + n$$

$$C = 3 + 0.5n$$

Number of beads	Total cost (\$)
0	3.00
2	3.50
4	4.00

Number of beads	Total cost (\$)
0	2.50
2	3.50
4	4.50



## Question 8

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Complete this statement.

When a large amount of data is collected, an appropriate way to present and analyze data involving one variable is ✓

- a box plot
- a broken-line graph
- a scatter plot

and for data involving two variables,

## Question 9

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A recipe calls for  $\frac{1}{4}$  cup of melted butter.

If the recipe is tripled, how many tablespoons of melted butter would be required?

**Hint:** 4 tablespoons =  $\frac{1}{4}$  cup

12 tablespoons

4 tablespoons

$\frac{3}{4}$  tablespoon

$\frac{1}{12}$  tablespoon

## Question 10

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A company that makes containers is creating a program that will determine and display the volume of a cylindrical package when the radius and height are input by the user.

Given the following lines of pseudocode, drag and drop the lines into the correct sequence in order to create the program.

output "Enter the radius."

store user input as **radius**

store user input as **height**

**volume = 3.14 \* radius \* height \* height**

**volume = 3.14 \* radius \* radius \* height**

output "Enter the height."

output "The volume is ", **volume** ."

output "The volume is ", **radius \* height** , ."

## Question 11

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Drag and drop the **TWO** expressions that make this equation true.

$(-2x + 1)$

$(2x - 1)$

$(3x - 4)$

$(7x - 4)$

$$\text{ } - \text{ } = 5x - 3$$

## Question 12

 Flag this question.

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Malik knows that the width of his hand is **3** inches.

He measures the height of a table to be  $9\frac{1}{2}$  widths of his hand.

Based on this information, what is the height of the table, in inches?

3 inches

$12\frac{1}{2}$  inches

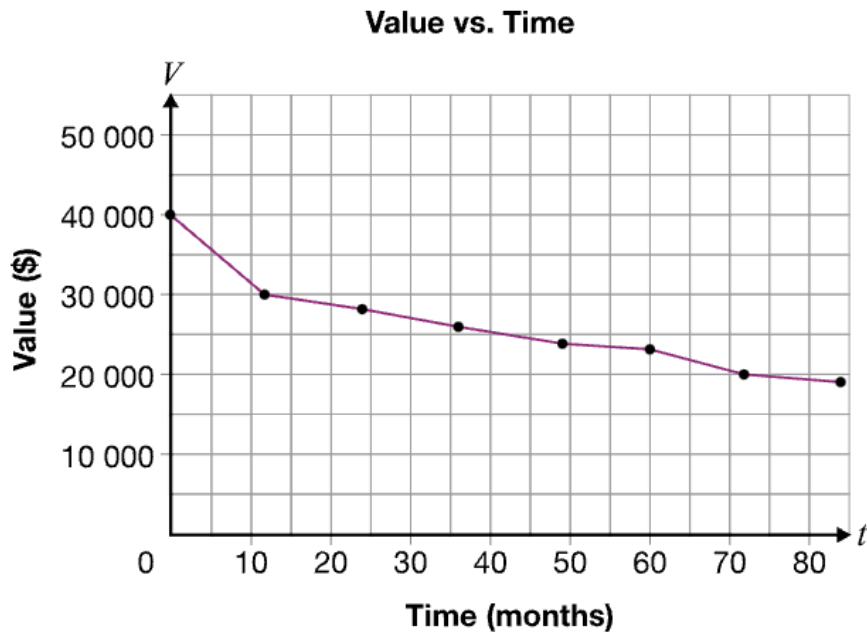
27 inches

$28\frac{1}{2}$  inches

### Question 13

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Which sentence best describes the change in the value of the item shown in the graph?



The value of this item appreciates.

The value of this item depreciates.

The value of the item both appreciates and depreciates.

The value of the item neither appreciates nor depreciates.