

## EQAO PRACTICE TEST #1

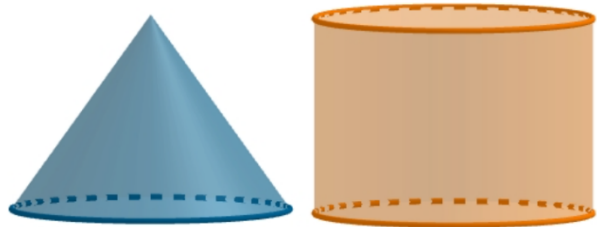
The Grade 9 Practice Test #1 has one session.  
The session is split into two stages:

**Stage 1** has 14 questions, and  
**Stage 2** has 13 questions.

### STAGE 1

- 1** A cone and a cylinder have the same height and the same radius.  
If the volume of the cylinder is  $162 \text{ cm}^3$ , what is the volume of the cone?

- $486 \text{ cm}^3$   
  $324 \text{ cm}^3$   
  $54 \text{ cm}^3$   
  $81 \text{ cm}^3$



- 2** What is the value of  $\left(-\frac{7}{4}\right)^2$ ?

- $-\frac{49}{4}$                         $\frac{49}{4}$   
  $\frac{49}{16}$                           $-\frac{14}{8}$

- 3** Draw an arrow connecting each example of financial situations involving appreciation and depreciation to the correct box.

The value of a guitar that tripled over 40 years

The value of a cell phone over time

The increasing value of a piece of art over time

**Financial situation involving appreciation**

**Financial situation involving depreciation**

- 4** Information about two linear relations is shown in the tables of values on the right. Select the words that correctly complete the following statement if the relations were graphed on the same grid.

**Relation 1**

Time (min)	Temperature (°C)
5	10
10	13
15	16
20	19

The line that represents Relation 2 starts

- higher       lower

and ascends

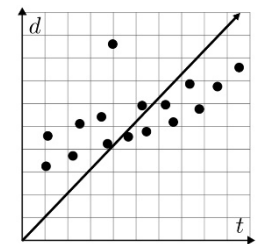
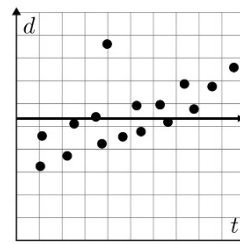
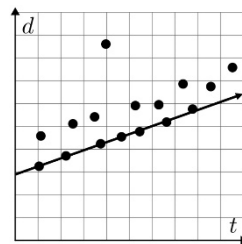
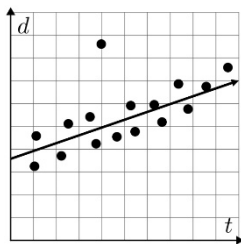
- more       less

quickly than the line for Relation 1.

**Relation 2**

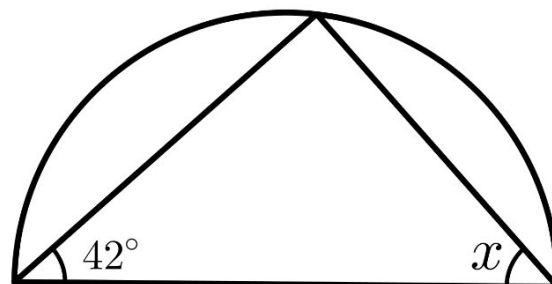
Time (min)	Temperature (°C)
20	14
40	22
60	30
80	38

- 5** Which graph shows the most appropriate line of best fit for the data?



- 6** A triangle is inscribed in a semicircle, as shown in the following diagram. What is the measure of angle  $x$ ?

- 48°  
 42°  
 45°  
 90°





**10** Select **ALL** of the points that satisfy the inequality  $-2x + 3y \geq 10$ .

(3, 5)

(-2, 2)

(1, 6)

(-7, -2)

**11** What is the value of  $2.6 + 0.5\left(1\frac{3}{4}\right) - \frac{3}{2}$ ?

$1\frac{29}{40}$

$\frac{19}{40}$

$1\frac{39}{40}$

$\frac{3}{5}$

**12** What value of  $x$  makes the following equation true?

$$-\frac{x}{12} = -\frac{5}{4}$$

8

-15

15

-8

**13** Simon uses his slippers, which are each 30 cm long, to measure the length of a wall in his home.

If the wall is 15 slipper lengths long, what is its length in metres?

4.0 m

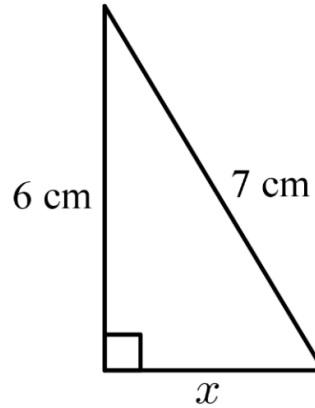
4.5 m

5.2 m

3.75 m

**14** Which of the following is the exact value of  $x$  in the given diagram?

- 3 cm
- $\sqrt{13}$  cm
- $\sqrt{3}$  cm
- $\sqrt{113}$  cm



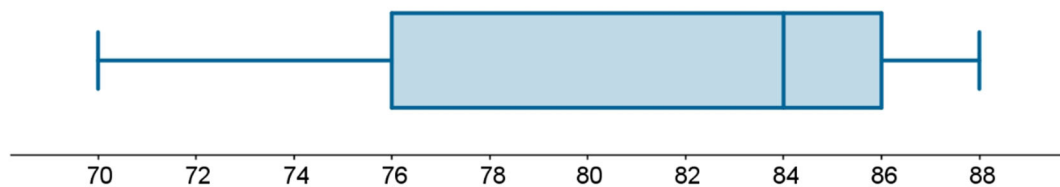
## STAGE 2

**15** What is the correct way to express 25 300 000 using scientific notation?

- $2.53 \times 10^{-7}$
- $2.53 \times 10^7$
- $25.3 \times 10^{-6}$
- $253 \times 10^5$

**16** The box plot shown below illustrates Naomi's math test marks for the school year.

Which of the following statements **MUST** be true?



- Naomi wrote exactly five math tests during the school year
- Naomi received a mark of 76 on at least one math test
- At least half of Naomi's math test marks are 84 or higher
- Naomi's mean test mark is 84

- 17 Draw arrows to connect two of these terms to the corresponding positions in the following equation to make the expressions equivalent:

$12x^2$

$4x^2$

$0$

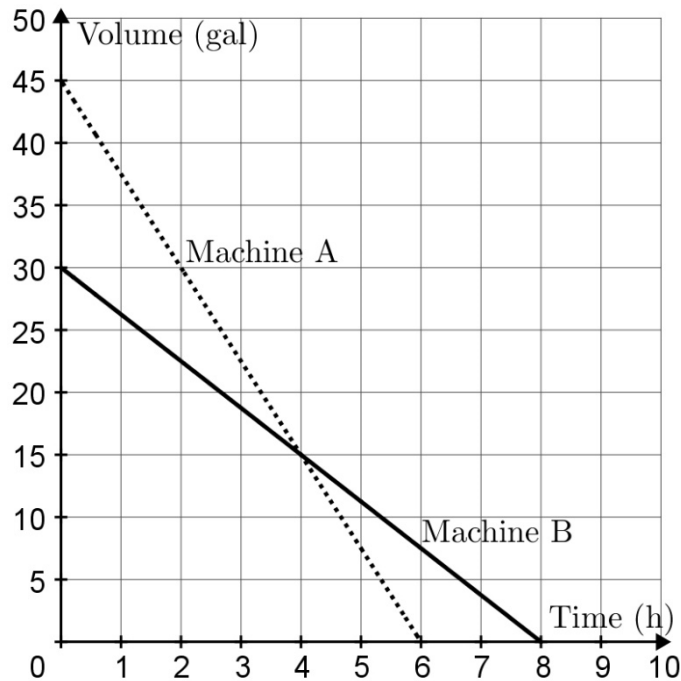
$10$

$12x$

$5$

$$3x(4x + 5) - (8x + 5) = \text{ } + 7x - \text{ }$$

- 18 The graph below shows the volume of gasoline, in gallons, remaining in two machines over several hours of continuous operation.



Select the **TWO** true statements below.

- Machine A runs out of gasoline before Machine B
- Machine A and Machine B start with the same amount of gasoline
- The two machines never have equal volumes of gasoline at the same time
- Machine A consumes gasoline at a greater rate than Machine B



- 22** The following sequence begins with the numbers 0 and 1, and each following term is found by adding the previous two terms:

0, 1, 1, 2, 3, 5, 8, ...

Pseudocode is written to display the first 30 terms of this sequence.

Draw an arrow to indicate where each line of code should be placed to correctly complete the pseudocode.

calculate **Next** = **ValueOne** + **ValueTwo**

set **ValueTwo** = **Next**

set **ValueTwo** = 1

set **ValueOne** = -1

loop 30 times

display **Next**

set **ValueOne** = **ValueTwo**

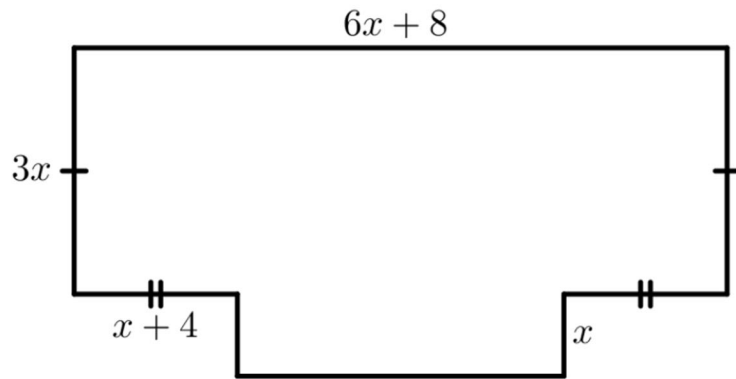
- 23** Select **ALL** of the following sets of numbers that include 0.

- natural numbers
- irrational numbers
- integers
- real numbers



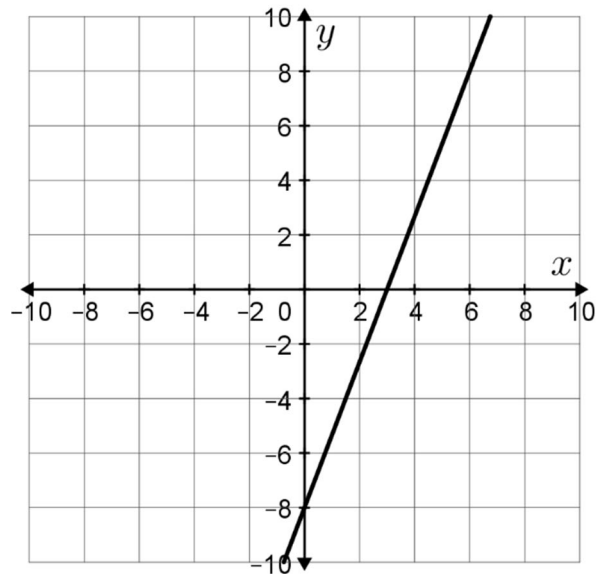
**24** In the following figure, all angles formed by adjacent sides are right angles. Which algebraic expression represents the area of the figure?

- $20x + 16$
- $23x^2 + 28x$
- $22x^2 + 24x$
- $18x^2 + 24x$



**25** What is the equation of the line shown in the graph?

- $8x - 3y = 24$
- $3x + 8y = -24$
- $y = 3x - 8$
- $3x - 8y = 24$



**26** Which of the following correlation coefficients would indicate the weakest linear relationship between the two variables of a data set?

- $r = 0.02$
- $r = 0.85$
- $r = -0.43$
- $r = -0.96$

**27** Rami plans to invest \$1000 for 3 years using one of the following interest calculation options:

**Option 1:** Simple interest at a rate of 2.8% per year

**Option 2:** Compound interest at a rate of 2.8% per year, compounded monthly

**Option 3:** Compound interest at a rate of 2.8% per year, compounded annually

Select the **TWO** true statements below.

- Option 1 earns the greatest amount of interest
- Option 3 is an example of linear growth
- Option 2 earns more interest than option 3
- Option 3 earns more interest than option 1