

*Important Concepts . . .*

# Preview Review



**Mathematics    Grade 9**  
**W3 - Quiz**

## Important Concepts of Grade 9 Mathematics

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W1 - Lesson 3 .....	Rational Numbers
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W1 - Lesson 5 .....	Square Roots of Rational Numbers
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W1 - Quiz	
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W2 - Lesson 8 .....	Linear Inequalities
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W2 - Quiz	
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W3 - Lesson 12 .....	Polygons and Scale Diagrams
W3 - Lesson 13 .....	Rotational Symmetry
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W3 - Quiz	

## Materials Required

Paper  
Pencil  
Calculator

## No Textbook Required

**This is a stand-alone course.**

## Mathematics Grade 9

### Version 6

### Preview/Review W3 - Quiz

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# Preview/Review Concepts for Grade Nine Mathematics



***W3 – Quiz***

# QUIZ

This quiz should take between 25 and 40 minutes.

A pencil, eraser, and a scrap piece of paper (for rough work) are the only materials allowed for the quiz.

Teacher may choose to weight each question differently.

Print your name neatly on the quiz.

Complete all questions on the quiz.

Hand in the quiz when you complete it.

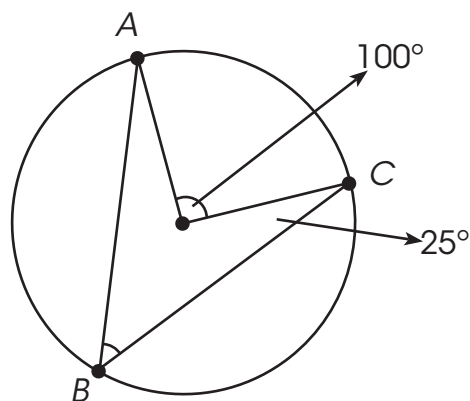
## Week 3 - Quiz

### Part 1: Multiple-Choice

Be sure to read each question carefully. Write the letter of the **best** answer in the blank in front of each question. Each multiple choice is worth 1 mark.

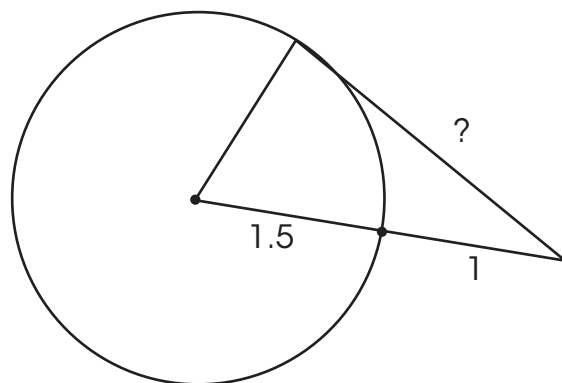
- \_\_\_\_\_ 1. What is the measure of the inscribed angle  $B$ ?

- A.  $25^\circ$
- B.  $50^\circ$
- C.  $100^\circ$
- D.  $200^\circ$

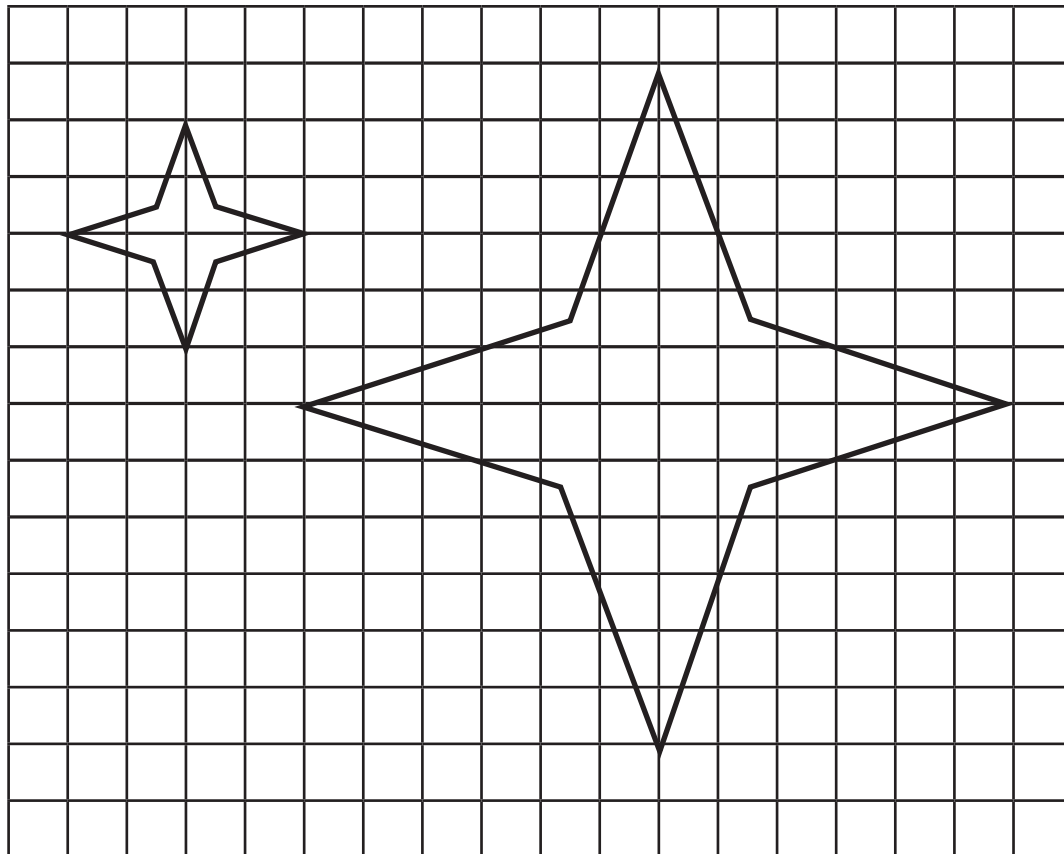


- \_\_\_\_\_ 2. What is the length of the line segment, rounded to the nearest whole number?

- A. 1
- B. 1.5
- C. 2
- D. 2.5



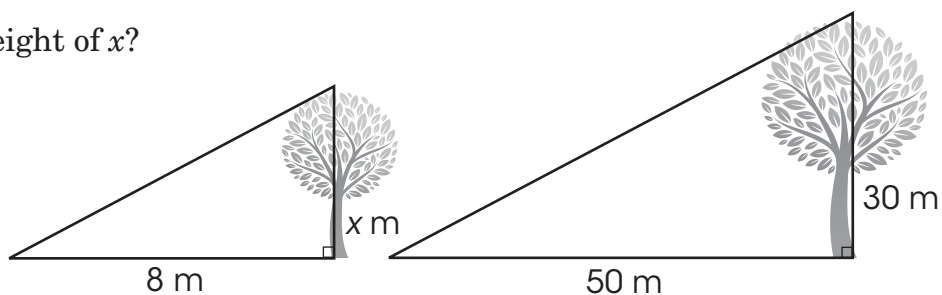
\_\_\_\_\_ 3. Which of the following is a correct statement about the images below?



- A. This depicts an enlargement, with a scale of 3.
- B. This depicts an enlargement, with a scale of 4.
- C. This depicts a reduction, with a scale of 3.
- D. This depicts a reduction, with a scale of 4.

\_\_\_\_\_ 4. What is the height of  $x$ ?

- A. 4.8 m
- B. 187.5 m
- C. 4.2 m
- D. 13.3 m



\_\_\_\_\_ 5. A scale factor of a shape reduced to 40% can be represented by which amount?

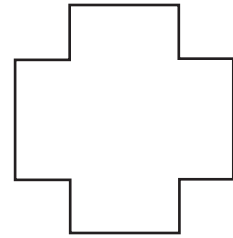
A. 2.5

B. 40

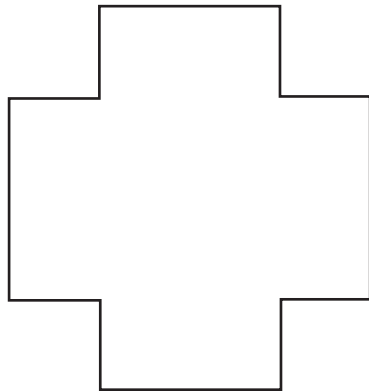
C.  $\frac{2}{5}$

D. 4

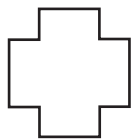
\_\_\_\_\_ 6. Which if the following is an enlargement of this image?



A.



B.



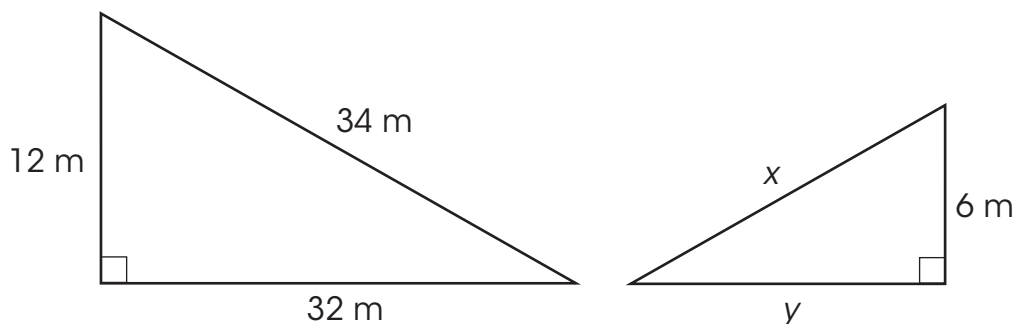
C.



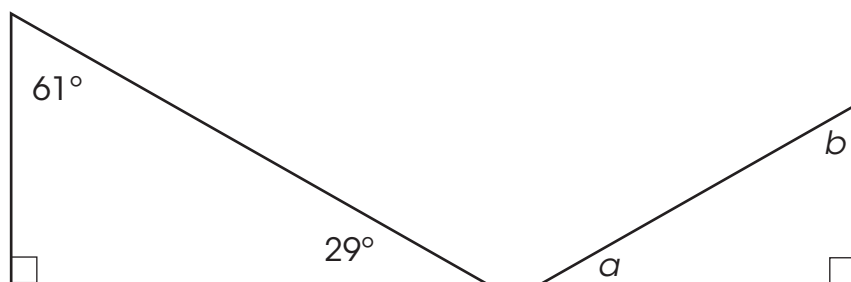
D.



- \_\_\_\_\_ 7. The two triangles are similar. What are the values for  $x$  and  $y$ ?



- A.  $x = 17$  m,  $y = 16$  m  
B.  $x = 68$  m,  $y = 64$  m  
C.  $x = 16$  m,  $y = 17$  m  
D.  $x = 64$  m,  $y = 68$  m
- \_\_\_\_\_ 8. The two triangles are similar, with corresponding angles. What are the values for  $x$  and  $y$ ?

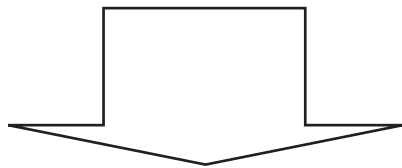


- A.  $a = 30.5^\circ$ ,  $b = 15.5^\circ$   
B.  $a = 15.5^\circ$ ,  $b = 30.5^\circ$   
C.  $a = 61^\circ$ ,  $b = 29^\circ$   
D.  $a = 29^\circ$ ,  $b = 61^\circ$

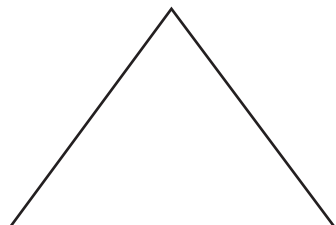


\_\_\_\_\_ 9. Which of the following shapes has 4 lines of symmetry?

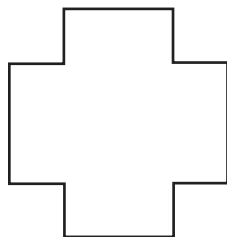
A.



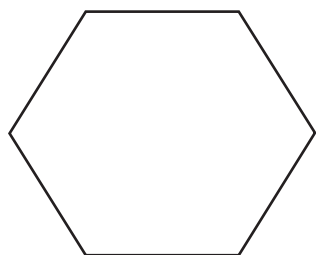
B.



C.

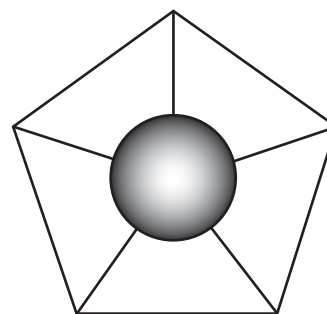


D.

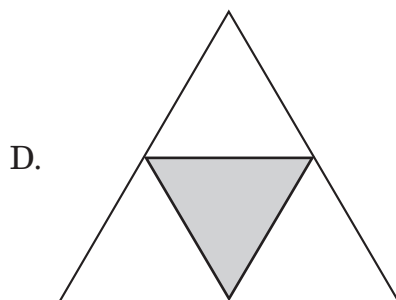
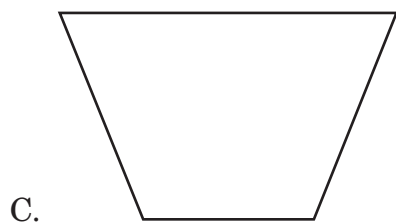
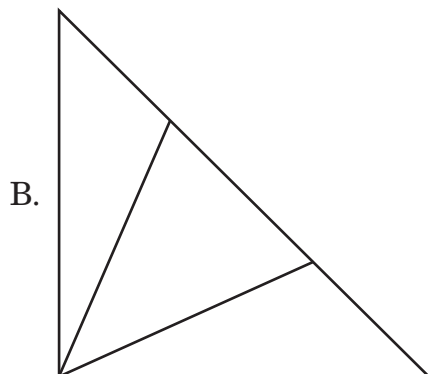
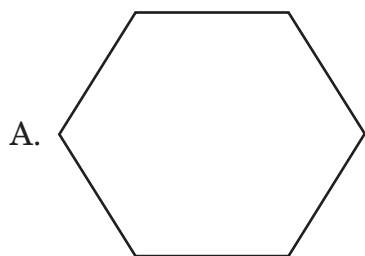


\_\_\_\_\_ 10. The figure shown has rotational symmetry. What is the angle of rotation?

- A.  $36^\circ$
- B.  $60^\circ$
- C.  $72^\circ$
- D.  $144^\circ$

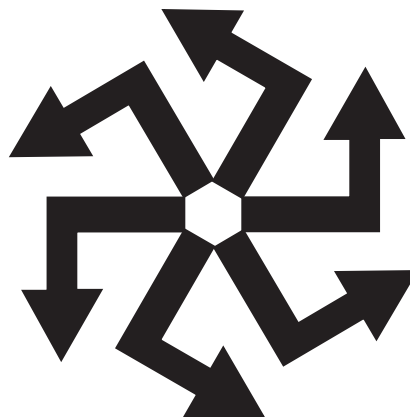


\_\_\_\_\_ 11. Which image has 3 lines of symmetry?



\_\_\_\_\_ 12. What is the order of symmetry?

- A. 4
- B. 5
- C. 6
- D. 8



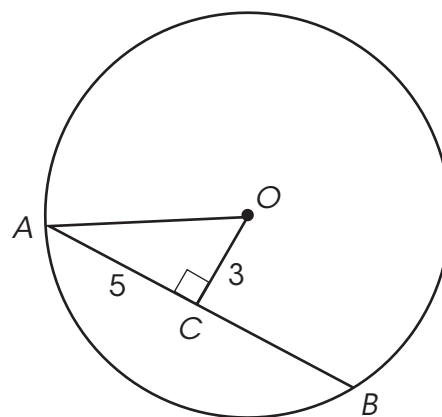
\_\_\_\_\_ 13. If Susan asked 15 juice drinkers if they would support replacing the juice machines in the school with water bottle machines, what would be the major influencing factors that could impact her results?

- A. Cultural sensitivity
- B. Bias
- C. Timing
- D. Use of language

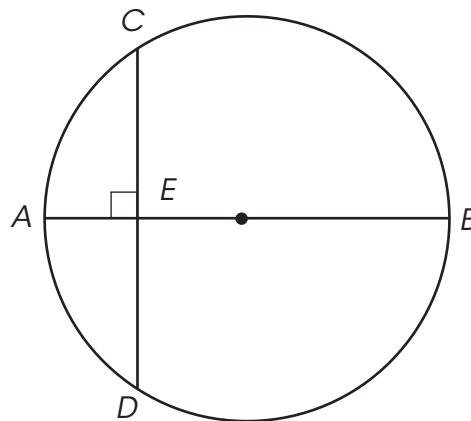
**Part 2: Short Answer**

Show all your work. Simplify the answer to lowest terms when necessary.

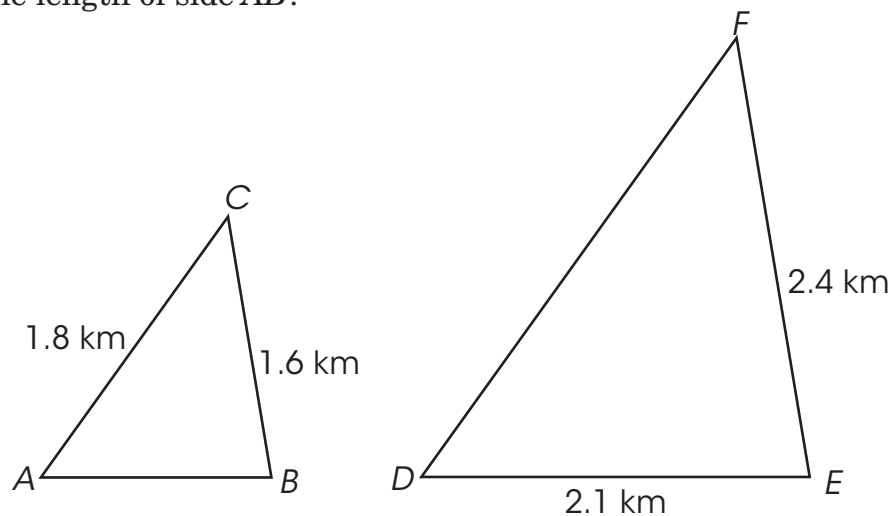
1. Determine the length of  $AO$  and  $AB$  rounded to the nearest tenth.



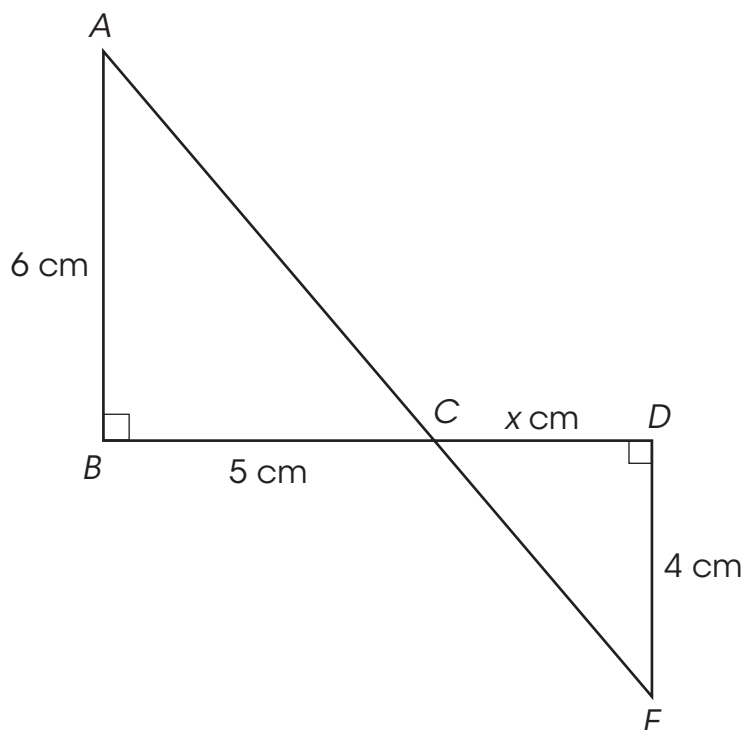
2. The diameter of a circle is 20 cm. Chord  $CD$  is 8 cm from the centre. What is the length of the chord?



3. What is the length of side  $AB$ ?



4.  $\triangle ABC$  is similar to  $\triangle EDC$ . What is the length of  $CD$ ?



5. Look at the following image.

a. How many lines of symmetry are there? \_\_\_\_\_

b. What is the order of symmetry? \_\_\_\_\_

c. What is the angle of rotation? \_\_\_\_\_



6. For each situation, decide if a survey should be conducted using the population or a sample.

a. A survey of teachers, parents, students and administrators to see whether a school requires a second gym.

\_\_\_\_\_

b. A survey of customers across the country to determine the favourite ice cream flavour.

\_\_\_\_\_

7. Suppose two dice are rolled, with each die containing 6-sides. What is the probability of rolling an odd number, on both dice?

8. Explain the difference between theoretical probability and experimental probability.

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