Important Concepts . . .

Preview Review

Mathematics Grade 9 TEACHER KEY

W3 - Quiz

Important Concepts of Grade 9 Mathematics

W1 - Lesson 1 ..... Powers
W1 - Lesson 2 ..... Exponents
W1 - Lesson 3 ..... Rational Numbers
W1 - Lesson 4 ..... Order of Operations
W1 - Lesson 5 ..... Square Roots of Rational Numbers
W1 - Review
W1 - Quiz

W2 - Lesson 6 ..... Graphing Linear Relations
W2 - Lesson 7 ..... Solving Linear Relations
W2 - Lesson 8 ..... Linear Inequalities
W2 - Lesson 9 ..... Polynomials
W2 - Lesson 10 ..... Surface Area of 3D Objects
W2 - Review
W2 - Quiz

W3 - Lesson 11 ..... Properties of Circles
W3 - Lesson 12 ..... Polygons and Scale Diagrams
W3 - Lesson 13 ..... Rotational Symmetry
W3 - Lesson 14 ..... Representing Data
W3 - Lesson 15 ..... Probability
W3 - Review
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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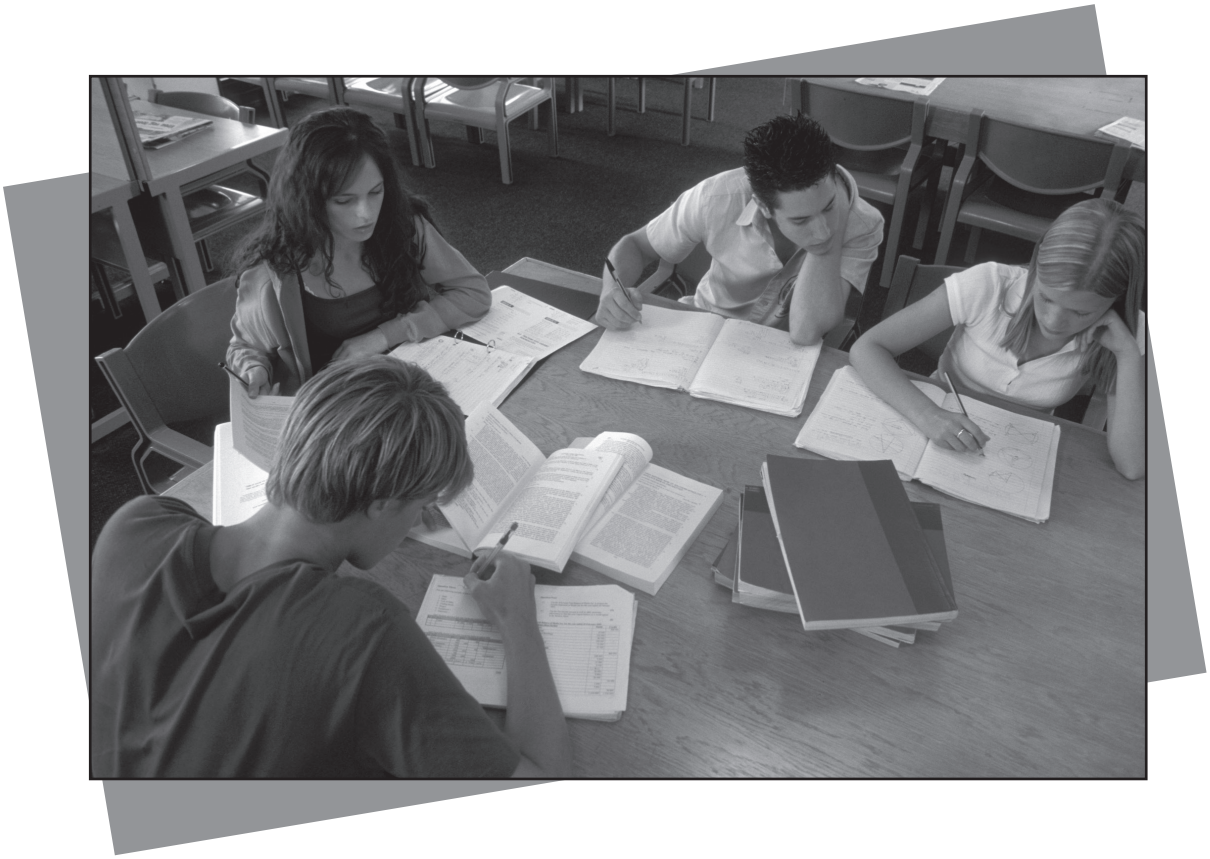
Preview/Review Concepts for Grade Nine Mathematics

Teacher Key



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.

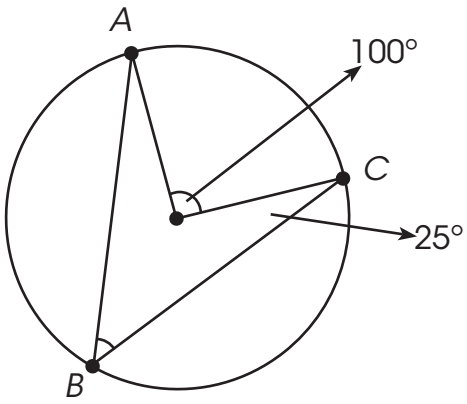
Week 3 – Quiz

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.

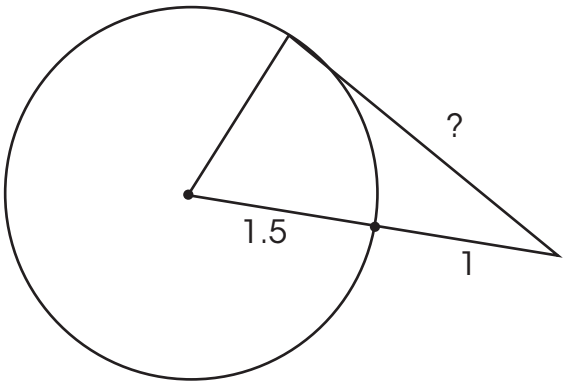
___B___ 1. What is the measure of the inscribed angle B?

A. 25°
B. 50°
C. 100°
D. 200°

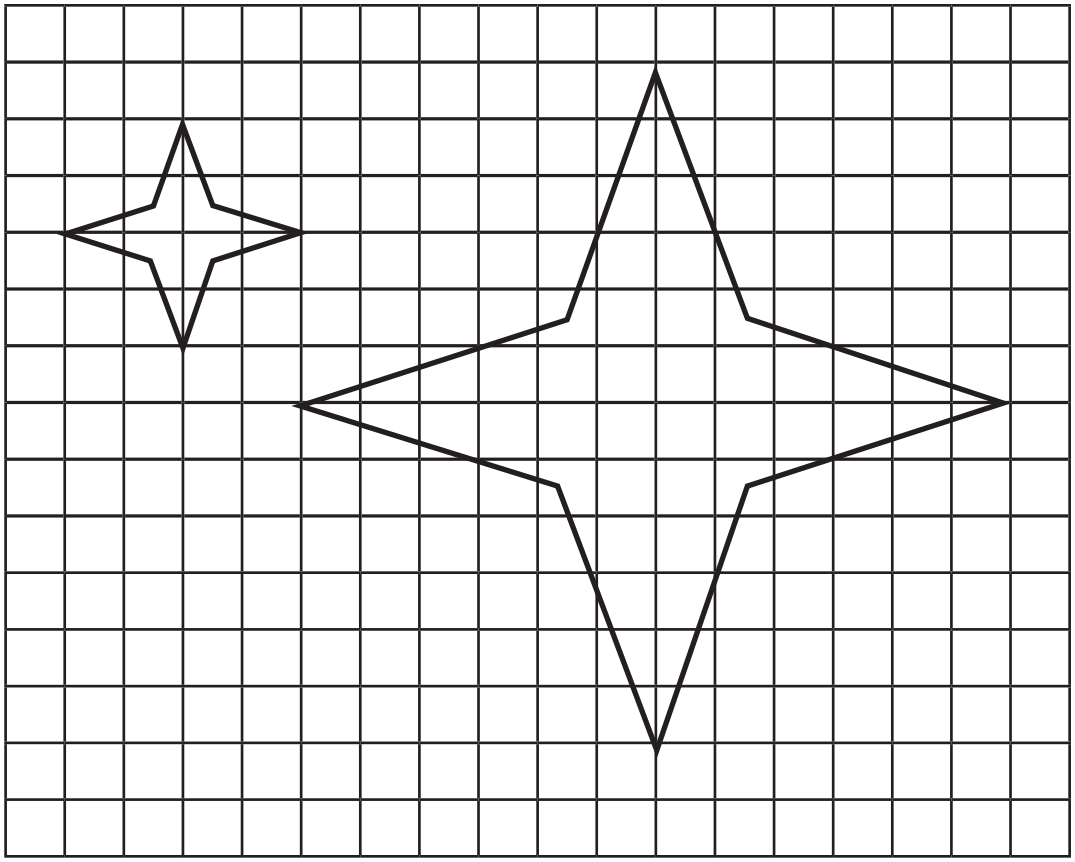


___C___ 2. What is the length of the line segment, rounded ot the nearest whole number?

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



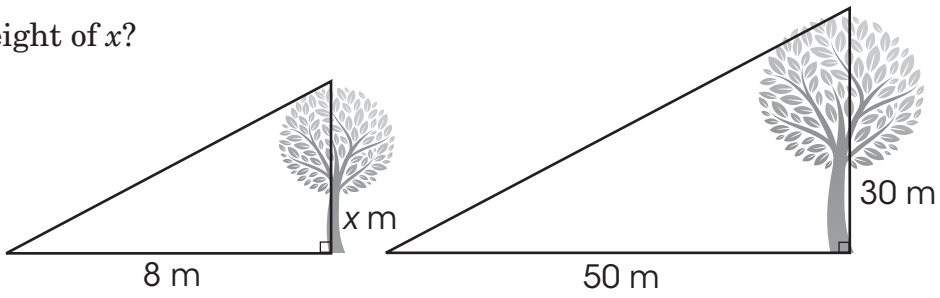
A 3. Which of the following is a correct statement about the images below?



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.

A 4. What is the height of x?

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



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

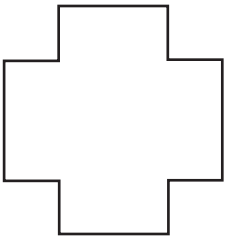
A. 2.5

B. 40

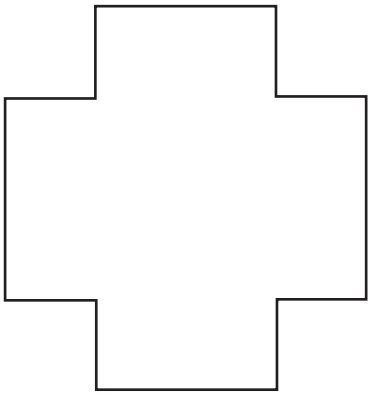
C. $\frac{2}{5}$

D. 4

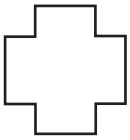
___A___ 6. Which if the following is an enlargement of this image?



A.

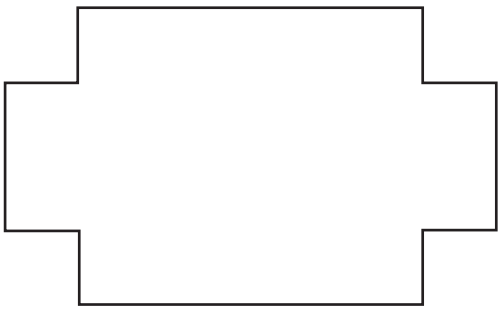


B.

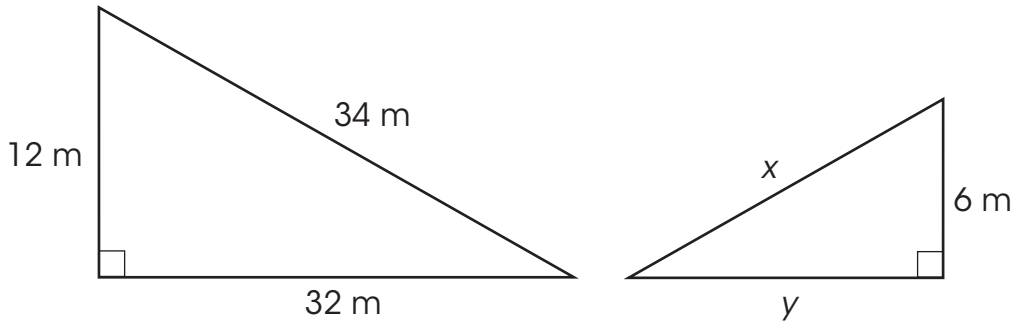


C.

D.

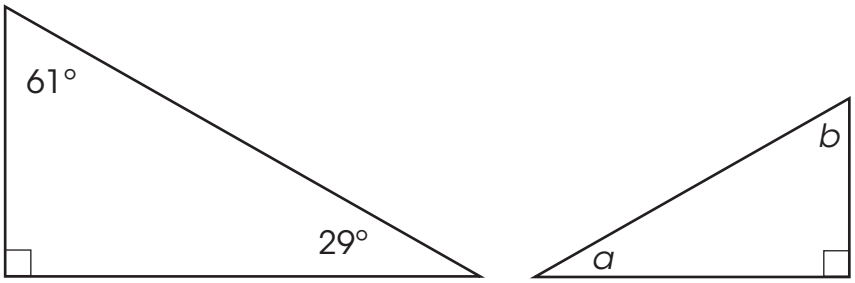


A 7. The two triangles are similar. What are the values for x and y?



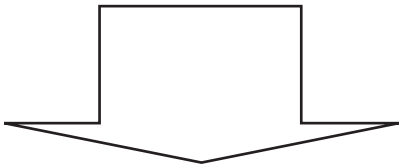
A. $x = 17$ m, $y = 16$ m
B. $x = 68$ m, $y = 64$ m
C. $x = 16$ m, $y = 17$ m
D. $x = 64$ m, $y = 68$ m

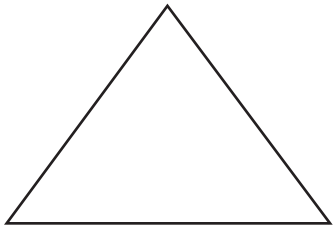
D 8. The two triangles are similar, with corresponding angles. What are the values for x and y?

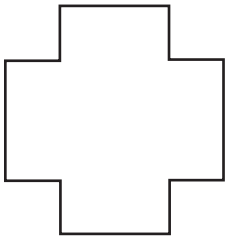


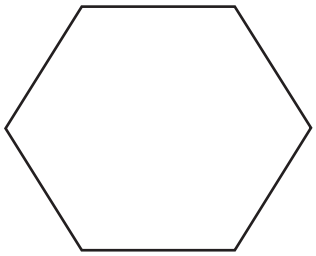
A. $a = 30.5°$, $b = 15.5°$
B. $a = 15.5°$, $b = 30.5°$
C. $a = 61°$, $b = 29°$
D. $a = 29°$, $b = 61°$

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

A. 

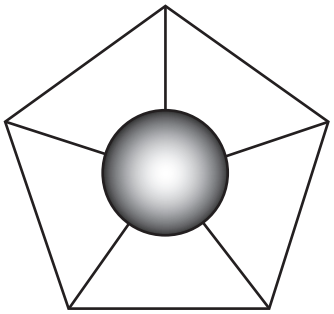
B. 

C. 

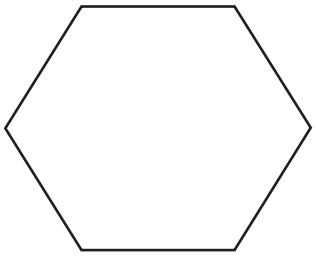
D. 

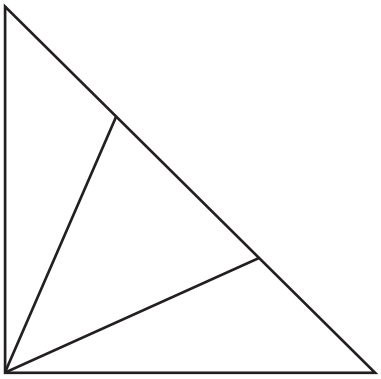
___C___ 10. The figure shown has rotational symmetry. What is the angle of rotation?

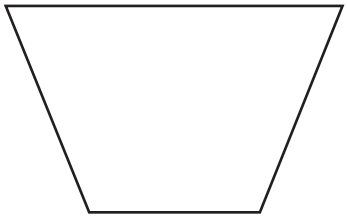
A. 36°
B. 60°
C. 72°
D. 144°

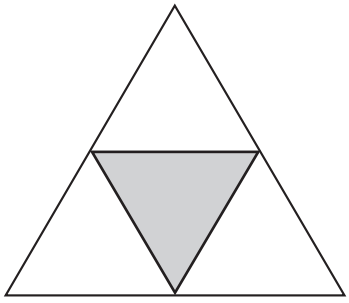


__*D*__ 11. Which image has 3 lines of symmetry?

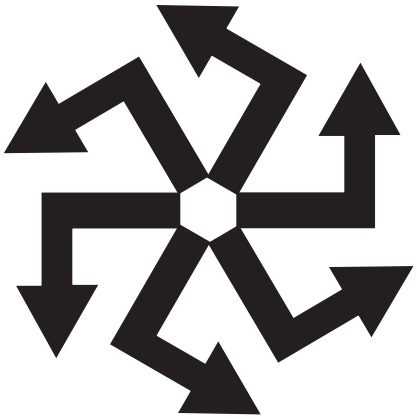
A. 

B. 

C. 

D. 

__C__ 12. What is the order of symmetry?



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

__D__ 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?

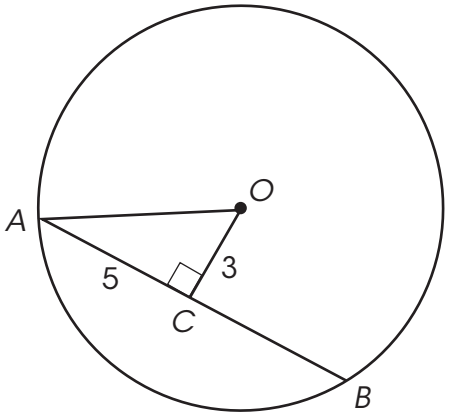
A. Cultural sensitivity
B. Bias
C. Timing
D. Use of language

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.

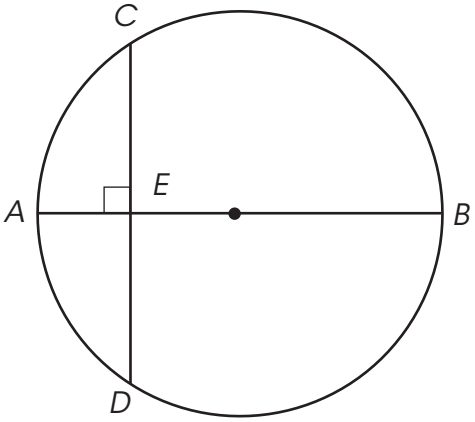
AO
$5^2 + 3^2 = AO^2$
$25 + 9 = AO^2$
$34 = AO^2$
$AO = 5.8$
$AB = AC \times 2$
$AB = 10$



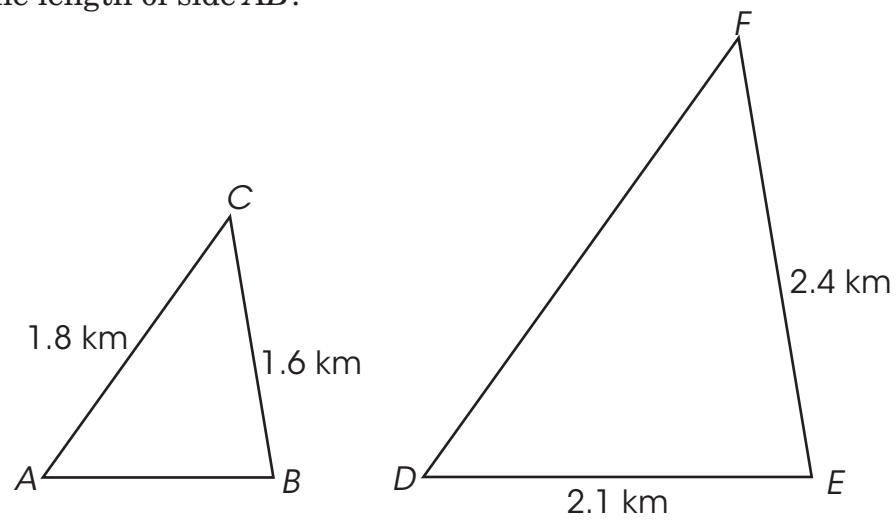
2. The diameter of a circle is 20 cm. Chord *CD* is 8 cm from the centre. What is the length of the chord?

C to centre = 10 cm
$E^2+CE^2 = 10^2$
$8^2 + CE^2 = 100$
$CE^2 = 36$
$CE = 6$

So the length of the chord is 12 cm.



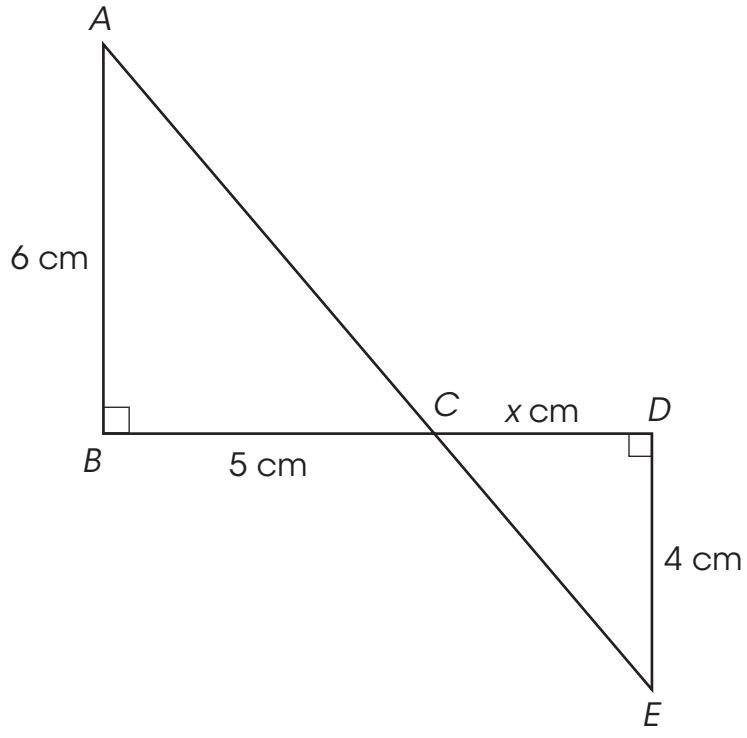
3. What is the length of side AB?



$$\frac{CB}{AB} = \frac{FE}{DE}$$
$$\frac{1.6}{AB} = \frac{2.4}{2.1}$$
$$2.4AB = 3.36$$
$$AB = 1.4 \text{ km}$$

4. ΔABC is similar to ΔEDC. What is the length of CD?

$$\frac{6}{4} = \frac{5}{CD}$$
$$CD = 3.33 \text{ cm}$$



5. Look at the following image.

a. How many lines of symmetry are there? ***0***

b. What is the order of symmetry? ***6***

c. What is the angle of rotation? ***60°***

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.

Population

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

Sample

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

$$\frac{3}{6} \times \frac{3}{6} = \frac{9}{36} = \frac{1}{4}$$

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

Theoretical probability is what SHOULD happen.

$$\frac{\textit{Favourable outcomes}}{\textit{Possible outcomes}}$$

Experimental probability is what DOES happen.

$$\frac{\textit{Number of times event occurred}}{\textit{Number of times conducted}}$$

LEARNING
ANYTIME ANYWHERE