

# MATH CONCEPT

## 數學 · 思維 Learning Center

### Quick Test 8 (Secondary 2 Standard)

- The test has to be completed in 30 minutes.
- The questions follow the latest Syllabuses for Secondary Schools Mathematics (Secondary 1 - 5) from the Hong Kong Curriculum Development Council.

**Answers** (Free detailed solutions can be obtained in our centers)

- 1) 19.5425%    2) 6:9:8    3)  $(3x + 1 + y)(3x + 1 - y)$     4) 26    5) 1    6) 18.24 cm<sup>2</sup>  
 7)  $\triangle AFG \sim \triangle ADE$     8) -7 or 23    9) 16    10) 118.8°

Number of correct questions	Comment
0~4	Below average
5~6	Unstable
7~8	Standard
9~10	Distinction

“Quick Test” is only a preliminary assessment. **MATHCONCEPT Diagnostic Test (MDT)** is designed to determine precisely the math level of the student and analyze their strength and weakness on different math topics. You are welcomed to make appointment for assessment in any of our MathConcept center.

### MATHCONCEPT Diagnostic Test (MDT)

“MATHCONCEPT Diagnostic Test” consists of two parts and the whole test requires around 60 to 90 minutes to complete. The first part is a written test that designed to evaluate the student's strength and weakness with respect to grade-level material. The second part of the assessment is a series of oral questions that designed to evaluate student's understanding of key math concepts and skills. After the student has completed the assessment, our qualified MATHCONCEPT tutor will then explain thoroughly about the test result to the parents, generate a tailor-made learning plan and give out the curriculum materials that cater to the unique needs of each student.

**ASSESSMENT CHART**  
Date Taken: 12/03/2013  
Level P1

TKO-1163  
Avg: 71%

Topic	Score	Percentage
Computation	73%	32, 33, 52, 53
Fraction Sense	50%	12, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 54, 55, 56, 57, 5
Measurements	67%	23, 25
Number Sense	80%	41
Problem Solving	40%	60, 81, 82
Shapes	60%	39, 40
Spatial Relationships	100%	43, 44, 45, 46, 63
Unit Sense	78%	49, 50, 51

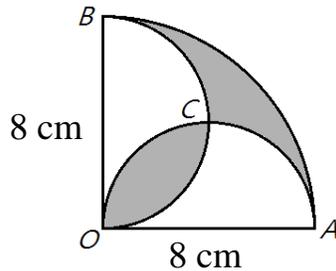
**Assessment Report**

**Prescriptive Learning Plan**  
Level P1, at Tseung Kwan O (TKO)  
01/09/2015

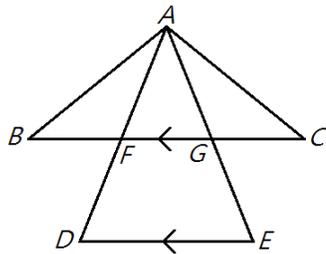
Topic	Prescriptive	Subtopic	
Computation	<input type="checkbox"/> 002_1	Extended Number Facts Addition	Whole Numbers (+ / -)
	<input type="checkbox"/> 003_1	Number Facts Subtraction	Whole Numbers (+ / -)
	<input type="checkbox"/> 014_1	> or < Than 10	Skip Counting
	<input type="checkbox"/> 015_1	Multiplication Basics	Whole Numbers (mult)
	<input type="checkbox"/> 021_2	Subtraction without borrowing	Whole Numbers (+ / -)
<input type="checkbox"/> FO_32	Addition Practice	Whole Numbers (+ / -)	
Fraction Sense	<input type="checkbox"/> 010_1	Half of Odd	Half of a Number
Measurements	<input type="checkbox"/> SC107	Centimeters	Length and Distance
	<input type="checkbox"/> SC108	Length and Distance (cm, mm)	Length and Distance
	<input type="checkbox"/> SC111	Time	Calendar
Number Sense	<input type="checkbox"/> SCA04	Placing Values	Place Values
Problem Solving	<input type="checkbox"/> 018_1	Problem Solving w/Word Problems	Word Problems
	<input type="checkbox"/> EPS101-105	Addition	Computation
	<input type="checkbox"/> EPS106-108	Subtraction	Computation
Shapes	<input type="checkbox"/> SC103	Geometric Shapes	Identifying Shapes
	<input type="checkbox"/> SCA03	Identifying 3-D Shapes	Identifying Shapes
Unit Sense	<input type="checkbox"/> 007_1	Counting Money	Money Concepts
	<input type="checkbox"/> 008_1	Measurement Basics	Units of Measurement

**Learning Plan**

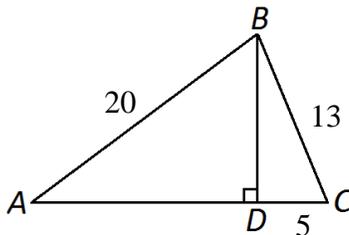
- Janet's tuition is \$ 2000 per month. If the tuition in the following 3 years increases by 3.5%, 5% and 10% respectively, what is the percentage increase in tuition after 3 years?
- If  $x : y = 2 : 3$  and  $x : z = 3 : 4$ , find  $x : y : z$ .
- Factorize  $1 + 6x + 9x^2 - y^2$ .
- Given that  $x + y = 6$  and  $xy = 5$ , find the value of  $x^2 + y^2$ .
- Given that  $a + \frac{1}{b} = 1$  and  $b + \frac{1}{c} = 1$ , find the value of  $c + \frac{1}{a}$ .
- Find the area of the shaded part in the following figure. Correct the answer to the nearest hundredth. (Take  $\pi = 3.14$ )



- In the figure below,  $BC \parallel DE$ , find a pair of similar triangles.



- If the distance between point  $A(8, -3)$  and point  $B(k, -3)$  is 15 units, find the possible values of  $k$ .
- In  $\triangle ABC$ ,  $BD \perp AC$ . If  $AB = 20$ ,  $BC = 13$  and  $CD = 5$ , find the length of  $AD$ .



- In a school, 42% of the population are male students, 33% of them are female students and 25% of them are teachers. If these data are displayed in a pie chart, what is the central angle of the section that represents female students?