Section A

Q1 - 8 AG

Q9 - 13 SA

Section B

Q1 - 14 VL

Q15 - Literacy FH

Carlingford High School

Mathematics

Year 7 Term 1 Examination

2018

Name: Soln. **Class: 7** ___

Circle your teacher's name: Mrs Gamble/Hooper Mrs Lego Miss Aung/ Mr Gong

Mr Cheng Miss Aung Mrs Pennington Ms Wilson/Ms Bennett

Time allowed: 50 minutes

- Board approved calculators may be used.
- Show all necessary working.
- Marks may be deducted for careless or untidy work.
- Questions marked with an asterisk * are extension level questions.
- Complete the examination in blue or black pen.

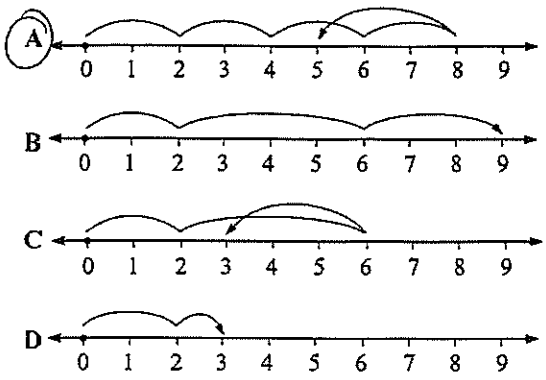
Topic	Computation of Integers	Angles	Literacy	Total
Mark	/27	/30	/6	/64
Extension*	/5	/8		/13
Total	/32	/38	/6	/76

Section A: Computation of Integers (32 marks)

Circle the correct answer in the multiple choice section.

1. Which of the following number line represents the expression:

$2+2+2+2-3$?



2. Which of the following numbers is not an integer?

A. 0 (B.) 0.5

C. 3 D. -2

3. Rewrite 3, −5, 0, −2, −1, 1 in ascending order. (2 marks)

$-5, -2, -1, 0, 1, 3$

4. Choose the correct symbol (< or >) to make the statements true. (2 marks)

i) $6 \_\_>\_\_ -4$

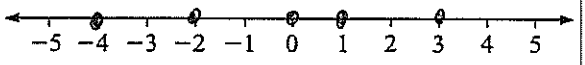
ii) $-50 \_\_>\_\_ -51$

5. Insert grouping symbols to make each of the following number sentences true. (2 marks)

i) $5 \times (3+8) = 55$

ii) $10 \times 3 - (16-2) = 16$

6. Plot the numbers −4, 0, 3, 1, −2 on the number line below. (2 marks)



7. Simplify the following: (7 marks)

i) $-5+2 =$ -3

ii) $-10 + (-2) =$ -12

iii) $100 \div (-4) =$ -25

iv) $8 \times -3 =$ -24

v) $-6 \times (-6) =$ 36

vi) $\frac{-25}{-5} =$ 5

*vii) $\frac{40 \times (-5) \times (-4)}{-10} =$ -80

8. Complete the following : (2 marks)

i) $(-2)^2 =$ 4

ii) $(-2)^5 =$ -32

9. Evaluate the following: (6 marks)

i) $30 - 3 \times 7 =$ 9

ii) $15 \div 3 + 2 =$ 7

iii) $(9+3) \times 4 + 5 =$ 53

iv) $8 \times 8 + 4 \times 4 =$ 80

v) $35 \div 7 + 15 - 24 \div 4 + 8 =$ 22

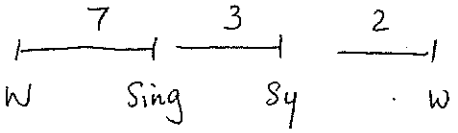
vi) $(-9) + [5 - (9-5)] =$ -8

10. At 5:00 am it was $-4°C$. The temperature rose $8°C$ by midday, then fell $6°C$ by 7:00 pm. What was the temperature at 7:00 pm? (1 mark)

$-4 + 8 - 6 = -2°C$

*12. Local time in Sydney is always 3 hours ahead of Singapore time, and Singapore is always 5 hours behind Wellington, which is 12 hours ahead of London.

What is the time difference between Sydney and London. (2 marks)



∴ 10 hours

11. Mary stepped into the elevator on the second floor below ground level. The elevator went down seven floors and then up three floors. On which floor did Mary get out? (2 mark)

$-2 - 7 + 3 = -6$ (1)

∴ 6th floor below ground level (1)

*13. On a test, each correct answer scores 5 points, each incorrect answer scores −2 points, and each question left unanswered scores 0 points.

A student answers 16 questions on the test correctly, 3 incorrectly and does not answer 1 question. What was the student's test mark? (2 marks)

$16 \times 5 + (3 \times -2)$

$= 80 - 6$

$= 74$ marks.

Section B: Angles (38 marks)
Circle the correct answer in the multiple choice questions.

1. Name the vertex of $\angle FGH$

A) F B) GH
C) FG (D) G

2. Name the arms of $\angle STU$.

A) TS and SU (B) TS and TU
C) UT and US D) SU and TS

3. Which of the following statements is **incorrect**?

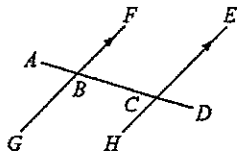
A) A right angle is larger than an acute angle, and smaller than an obtuse angle.

(B) An obtuse angle is smaller than a revolution, but larger than a reflex angle

C) A reflex angle is larger than an acute angle, but smaller than a revolution.

D) An acute angle is smaller than an obtuse angle, and smaller than a straight angle.

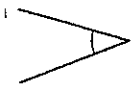
4. In the diagram below, four angles at the point B add to 360°.



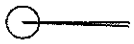
Three of these angles are $\angle ABF, \angle GBC$ and $\angle ABG$. Which is the fourth angle?

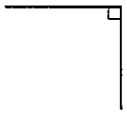
A) $\angle BCF$ B) $\angle ABC$
C) $\angle ACE$ (D) $\angle CBF$

5. Classify the following angles. (5 marks)

i)  acute

ii)  obtuse

iii)  revolution

iv  right

v)  straight

6. Classify the following angles given their sizes. (2 marks)

i) 58° acute

ii) 224° reflex

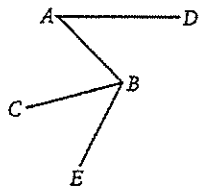
8. State whether the following statements are True or False. (2 marks)

i) Two right angles make a straight angle.

True

ii) An acute angle plus a right angle makes a reflex angle. False

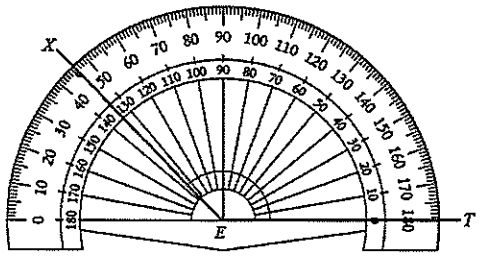
9. Name the angle adjacent to $\angle ABC$. (1 mark)



∠CBE

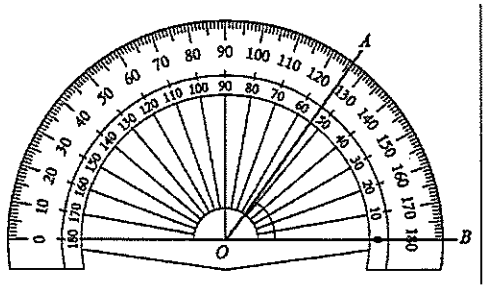
10. Find the size of the marked angle. (2 marks)

i)



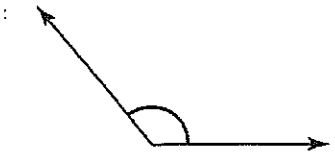
135°

ii)

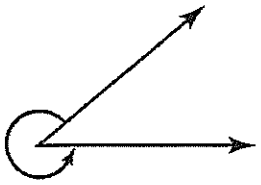


54°

11. Measure the size of the angle below. (1 mark)



12. Find the size of the reflex angle below. (2 marks)



12. What is the complement of 10° ? (1 mark)

80°

13. What is the supplement of 102° ? (1 mark)

78°

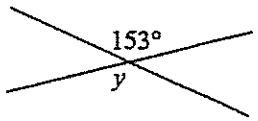
*14. Find the complement of the supplement of 100°. (2 marks)

180 - 100 = 80°

90 - 80° = 10°

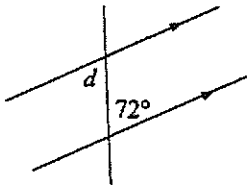
15. For each diagram below, find the value of the pronumeral. (8 marks)

i) (1 mark)



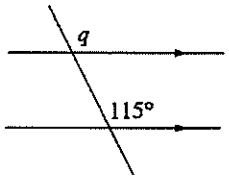
$y = 153°$

ii) (1 mark)



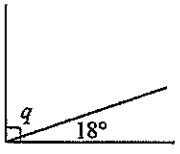
$d = 72°$

iii) (1 mark)



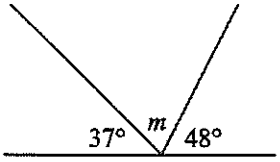
$q = 115°$

iv) (1 mark)



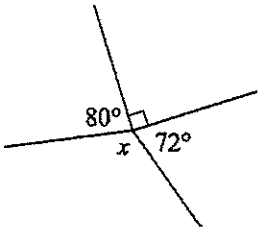
$q = 90 - 18$
$= 72°$

v) (1 mark)



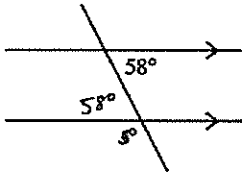
$m = 180 - 37 - 48$
$= 95°$

vi) (2 marks)



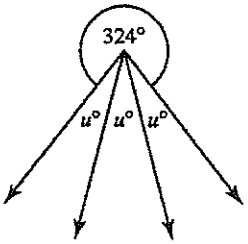
$x = 118°$

vii) (2 marks)



$S = 180 - 58$
$= 122°$

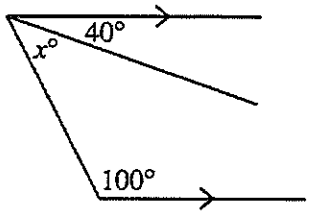
* viii) (2 marks)



$u = (360 - 324) \div 3$
$= 12°$

*16. Calculate the value of the pronumerals below. (4 marks)

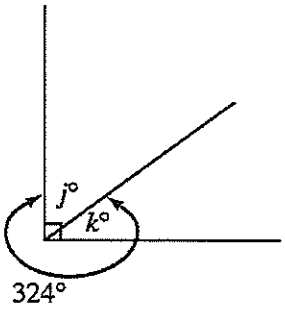
i) (2 marks)



$x = (180 - 100) - 40$

$= 40°$

ii) (2 marks)



$j = 36°$

$k = 90 - 36$

$= 54°$

Literacy: Use the following words to complete the sentences. (6 marks)

Positive	next	opposite
protractor	ruler	parallel
perpendicular	negative	equal

1. Angles that are next to each other are called adjacent angles.

2. A protractor is an instrument used for measuring and drawing angles.

3. Lines that point in the same direction and never intersect are called parallel lines.

4. Lines that intersect at right angles are called perpendicular lines.

5. Numbers greater than zero are called positive numbers.

6. Numbers less than zero are called negative numbers.

(28)