MHS Practice Examination

Exam #1

563-100

MATHEMATICS

Secondary One

Year One (Grade 7)

SEC I

Student Question Booklet Parts A, B and C

- ✓ This resource can be used for FREE by any teacher or student with an active Math Help Services account
- ✓ Detailed video solutions to each question are available within your MHS account

Supporting Teachers
Developing Students

Success on Summative Examinations

- ✓ The best way to prepare for a summative exam is to write multiple versions of that exam so that you become familiar with the format, the language and the time constraints.
- ✓ A memory aid is a much more valuable resource if you make it before you begin writing practice exams.
- ✓ We strongly suggest that you place yourself under the same time constraints while writing this exam as you will face when you write the ministry exam at the end of your course.
- ✓ Note that detailed video solutions to this exam are available in your *Math Help Services* account. Once your teacher makes the video solutions available you should watch the video solution to each question you had difficulty with to ensure that you know how to face this type of problem in the future.

Instructions

- ✓ You may use a calculator (with or without a graphic display), a ruler, a set square, a compass, a protractor or additional graph paper.
- ✓ You may refer to the memory aid you prepared on your own before the examination. This memory aid consists of one handwritten letter-sized sheet of paper (8 ½ x 11). Both sides of the sheet may be used. Any reproduction of this memory aid is forbidden.
- ✓ Only the above mentioned materials may be used.
- ✓ You have 3 hours to complete this examination.
- ✓ Note: Figures are not necessarily drawn to scale.

PART A

This part of the examination consists of Questions 1 to 6.
Identify the choice that best completes the statement or answers the

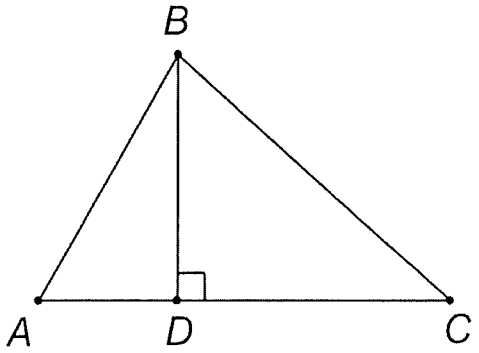
1. In the diagram given below, which line segment is the altitude of ΔABC?

a) $\overline{AB}$

b) $\overline{BC}$

c) $\overline{BD}$

d) $\overline{AC}$

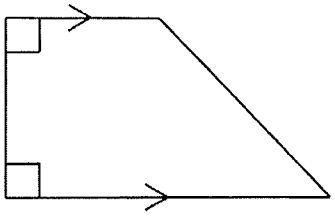


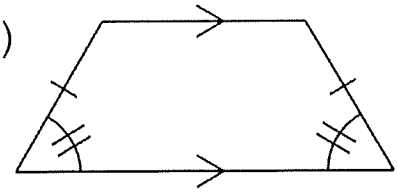
2. Chris recorded the midday temperatures from June 1st to the 7th in the chart below. Note the temperature on June 1st was 24°C. For June 2nd to 7th he just recorded the degree change from day to day. Using this data, what was the mean temperature for the first seven days of June?

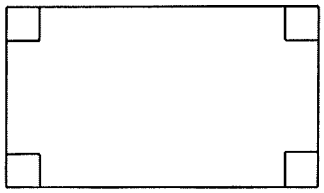
June 1	June 2	June 3	June 4	June 5	June 6	June 7
24°C	+2°C	+4°C	+1°C	–2°C	–5°C	+1°C

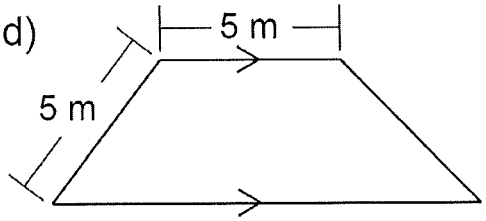
a) 26.6°C b) 27°C c) 28.1°C d) 3.6°C

3. Given the quadrilaterals below, which of them is a parallelogram?

a) 

b) 

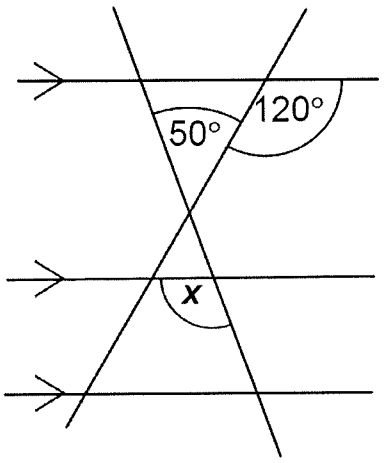
c) 

d) 

4. Malory would like to buy a new bicycle that costs $420. His mother said that she will pay for 40% of the total cost if Malory can pay for the rest. How much will Malory have to pay?

a) $168 b) $380 c) $252 d) $60

5. Given the diagram and the information below, determine the value of $\angle x$.



a) 120°

b) 130°

c) 110°

d) 70°

6. On June 1st, Dana had $1500 in her bank account.
   - On the 5th of June she deposited the $200 that she received on her birthday.
   - On the 12th of June she paid for 8 T-shirts with her bank card that cost $20 each.
   - On the 24th of June she used her bank card to pay for three concert tickets at the Bell Center that cost $80 each.

   Dana did not spend or deposit anymore money for the rest of the month.

   Which of the following expressions correspond to the amount of money that Dana will have in her bank account on July 1st?

   a) $1500+200-(8\times 20)+(3\times 80)$

   b) $1500+5\times 200-12\times(8\times 20)-24\times(3\times 80)$

   c) $1500-200+(8\times 20)+(3\times 80)$

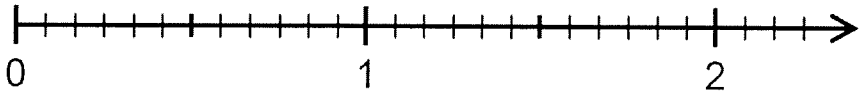
   d) $1500+200-(8\times 20)-(3\times 80)$

PART B

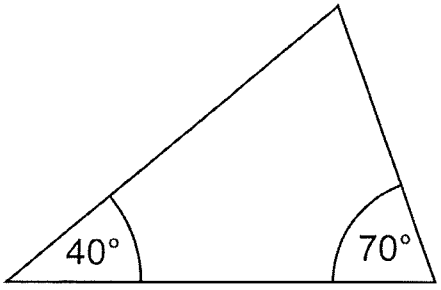
This part of the examination consists of Questions 7 to 10.
Short Answer: each question is graded on the basis of the correct answer only.

7. Correctly place the following 4 fractions on the number line given below.

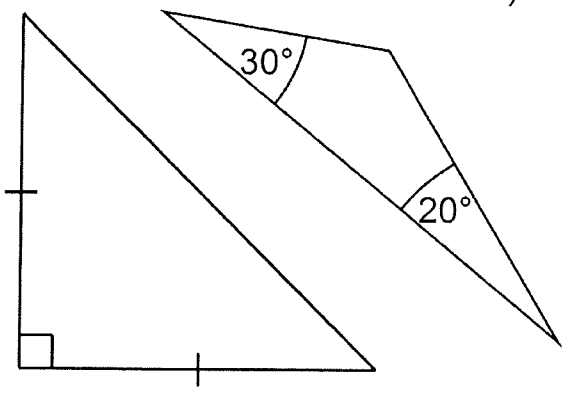
$$\frac{5}{6}, \quad \frac{3}{2}, \quad \frac{5}{3}, \quad \frac{1}{4}$$

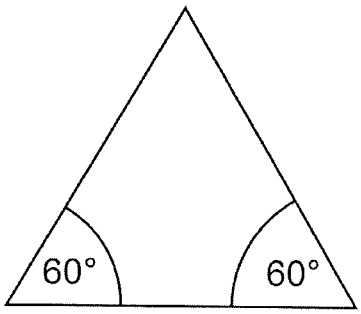


8. Given each of the names below, classify each of the following triangles with the most specific name possible (Write the letter inside the triangle).

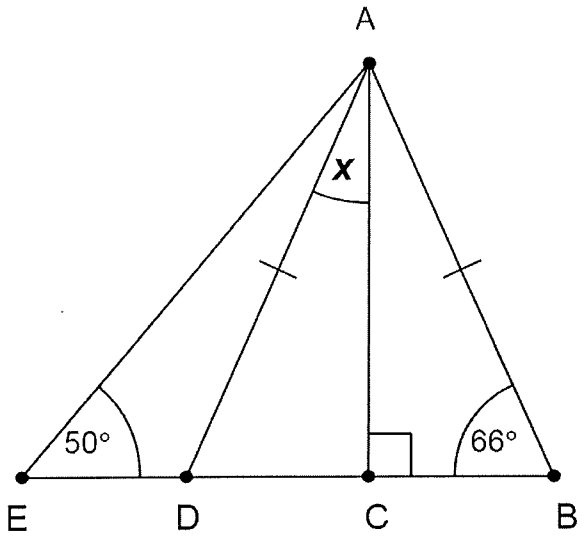


a) Equilateral triangle
b) Right triangle
c) Isosceles triangle
d) Right isosceles triangle
e) Obtuse triangle
f) Acute triangle

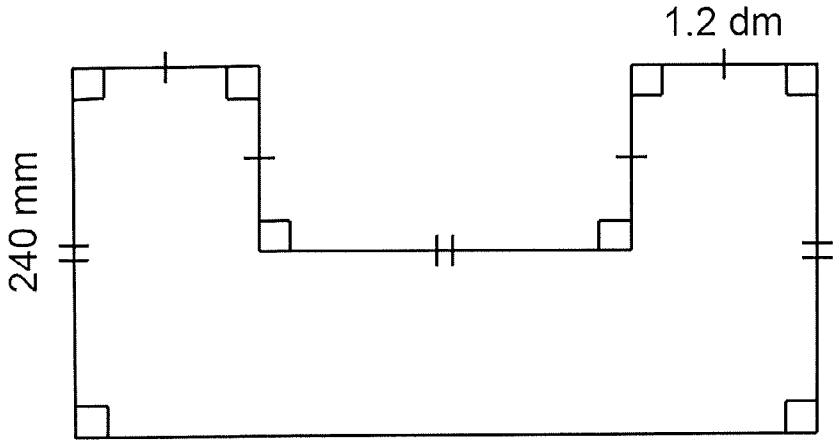




9. Given the diagram and the information below, determine the value of the missing angle, *x*.



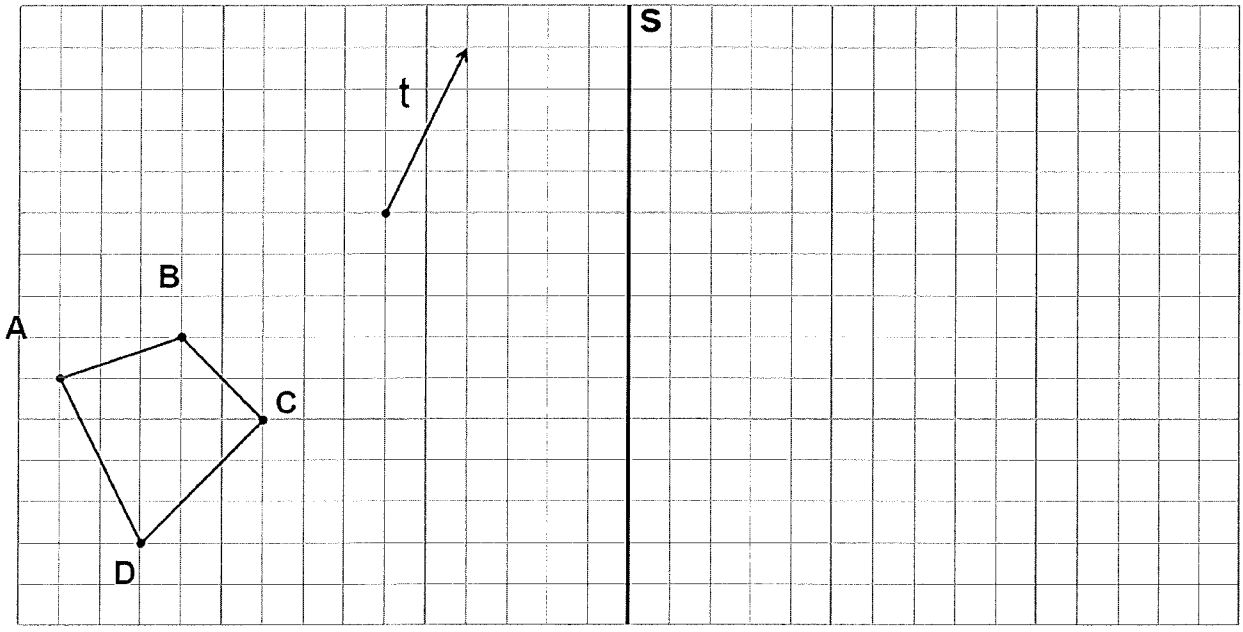
10. Calculate the perimeter of the figure below in cm.



PART C

This part of the examination consists of Questions 11 to 16.
For each question, you must show all your work to justify your answer.
Your work must be organized and clearly presented and cannot simply involve listing the calculator applications or programs used to obtain results or information.

11. Perform the indicated translation, **t**, on figure *ABCD* then reflect the translated figure over line **s**.



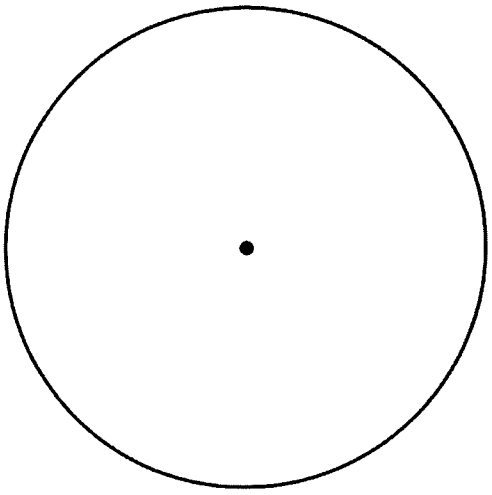
12. Carol goes to a fishing camp where it costs $5 to enter the camp and $2 for every fish you catch and take home.

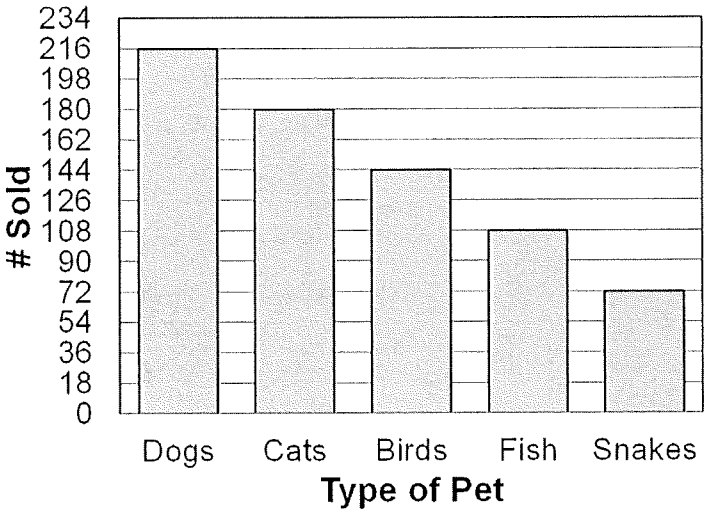
    A chart on the wall at the office where you pay shows the costs depending on how many fish you take home.

# of fish	1	2	3	4	5	6
Total Cost	7	9	11	13	15	17

- Find rule that relates the total cost to the number of the fish you take home.
- If Carol paid $33, how many fish did she take home?

13. Given the bar graph below that represents the number of different pets sold at a pet store last year, complete the following table in order to represent the data in a circle graph.





Type of Pet	# Sold	Decimal	Percent	Angle Measure
Total				

14. Chloe has decided to start playing golf. She has $1000 to spend on equipment and a membership at the golf course in her town. The local golf course has the following special offer on equipment and an annual membership:

    - Golf Clubs → Regular: $600, Special: 15% off
    - Golf Balls → Regular: $5 for 3 balls, Special: $16 per dozen
    - Golf Bag → Regular: $72, Special: 1/3 off
    - Golf Shoes → Regular: $80, Special: buy 1 pair and get the 2nd pair for 50% off
    - Golf Membership → Regular: $300, Special: 20% off if you pay in full by May 1st

    If Chloe wants to buy golf clubs, a golf bag, 2 pairs of golf shoes, 30 golf balls and pays her membership by May 1st, does she have enough money?

15. Karen's family owns a poultry farm. This week it is Karen's turn to collect the eggs. The containers that she uses to store the eggs can hold a maximum of 48 eggs.

    The table below shows the number of containers she collected each day last week.

Day	Mon	Tue	Wed	Thu	Fri
Number of Containers	5.25	$4\frac{1}{6}$	$\frac{25}{8}$	3	0.75

    If Karen's brother collected 750 eggs the week before, how many more eggs did Karen collect?

16. If the measures of each side of a rectangle are halved, what happens to the perimeter and area of the new rectangle?

    Use two examples to illustrate this situation and formulate a conjecture.