



NAME: \_\_\_\_\_

## Grade 8 Mathematics

### Final Examination

June 2010

#### Section A

Non-Calculator	Selected Response	10 Marks
	Constructed Response	10 Marks

You will need a pencil/eraser for this section. You are **not permitted** to use a calculator. You are permitted to use any math manipulatives that your teacher has used with you this year.

Questions 1-10 (multiple choice): These are worth 1 mark each. Even though you have to choose an answer, you may have to work things out on scrap paper. You have been given a computer scorable bubble sheet. You must be very careful of the way you handle this sheet. It will be scored by a computer and must not be **bent, torn**, or have **any** stray marks on it. You are to shade (**using a pencil only**) the appropriate bubble (having the same number as the question) on the bubble sheet. Do not shade more than one bubble or the question is scored as incorrect. Erase carefully with a good quality eraser if you need to change an answer.

Questions 1-4 (constructed response): Answers are to be done in the spaces provided. Students are reminded to show **all** steps/calculations since credit may be given for incomplete or partially correct solutions. **Numerical answers without workings/explanation will not merit full credit.** Your teacher will collect Section 1 when you are finished and will then give you Section B. You will need your bubble sheet again for Section B.

**ANSWER SHEET**  
**Grade 8 Mathematics**  
**Western School District**  
**June 2010**

Name: \_\_\_\_\_

**Section A: Non-Calculator**

<b>1.</b>	
<b>2.</b>	
<b>3.</b>	
<b>4.</b>	
<b>5.</b>	

<b>6.</b>	
<b>7.</b>	
<b>8.</b>	
<b>9.</b>	
<b>10.</b>	

<b>Teacher Use Only</b>	<b>Selected Response:</b>	<b>/10 Marks</b>
	<b>Constructed Response:</b>	<b>/10 Marks</b>
	<b>Total:</b>	<b>/20 Marks</b>

# Grade 8 Mathematics

## Formulae

Area	Square	$A = s^2$
	Rectangle	$A = l \times w$ or $A = b \times h$
	Triangle	$A = \frac{1}{2}bh$ or $A = \frac{bh}{2}$
	Circle	$A = \pi r^2$
Surface Area	Cylinder	$SA = 2\pi r^2 + 2\pi rh$
Volume	$V = \text{Area of Base} \times \text{Height}$	
Pi	$\pi$	Use $\pi = 3.14$

## Section A: Selected Response [10 Marks]

1. What is  $\sqrt{64}$ ?
  - A. 4
  - B. 8
  - C. 16
  - D. 32
  
2. Between which pair of whole numbers is  $\sqrt{60}$  located?
  - A. 6 and 7
  - B. 7 and 8
  - C. 29 and 31
  - D. 49 and 64
  
3. What is the product of  $(-6)$  and  $(+3)$ ?
  - A.  $-18$
  - B.  $-2$
  - C.  $+2$
  - D.  $+18$
  
4. Which multiplication statement represents  $(-4) + (-4) + (-4)$ ?
  - A.  $(-3) \times (-4)$
  - B.  $(-3) \times (+4)$
  - C.  $(+3) \times (-4)$
  - D.  $(+3) \times (+4)$
  
5. Which multiplication expression gives the same result as  $\frac{3}{4} \div \frac{3}{5}$ ?
  - A.  $\frac{3}{4} \times \frac{3}{5}$
  - B.  $\frac{4}{3} \times \frac{3}{5}$
  - C.  $\frac{3}{4} \times \frac{5}{3}$
  - D.  $\frac{4}{3} \times \frac{5}{3}$

6. What is  $2\frac{1}{4} \times 3\frac{1}{2}$ ?

A.  $\frac{9}{14}$

B.  $\frac{8}{3}$

C.  $\frac{21}{4}$

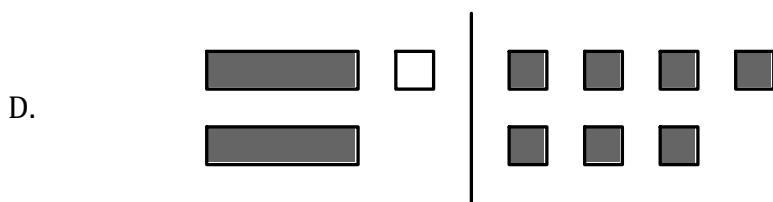
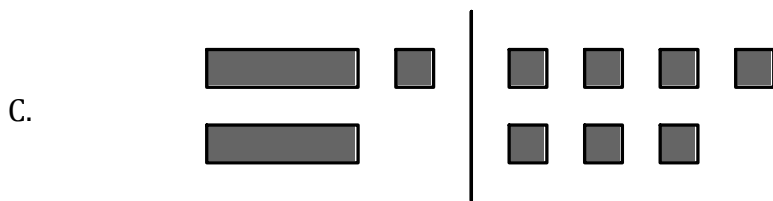
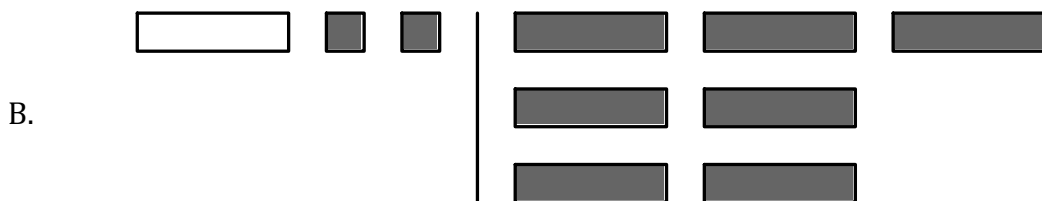
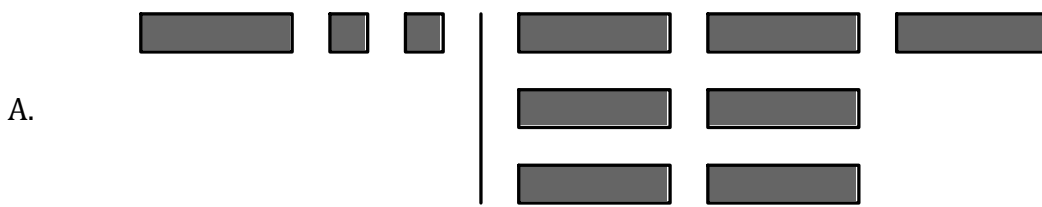
D.  $\frac{63}{8}$

7. The dimensions of four rectangular prisms are given. Which will hold the most water?

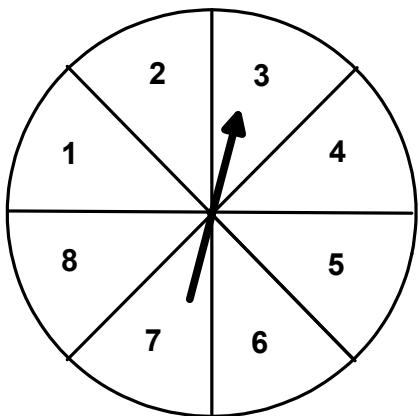
	Length (m)	Width (m)	Height (m)
A.	2	3	4
B.	4	5	5
C.	9	2	1
D.	10	2	3

8. Which set of algebra tile models the equation  $2x - 1 = 7$ ?

(Note: Shaded is positive, unshaded is negative)



9. The equation of a linear relation is  $y = 2x - 5$ . What is the missing number in the ordered pair  $(-2, \quad)$ ?
- A.  $-9$   
B.  $-1$   
C.  $1$   
D.  $9$
10. The spinner is spun and the coin is tossed. What is the probability of spinning a number less than 4 and tossing tails?



- A.  $\frac{1}{4}$   
B.  $\frac{3}{16}$   
C.  $\frac{2}{5}$   
D.  $\frac{7}{8}$

### Section A: Constructed Response [10 Marks]

Write your answers in the space provided, and show all workings to achieve full marks.

1. Sketch a model (i.e., Bank Model, Counters, Number line, etc.) to calculate:

$$(+10) \div (-5)$$

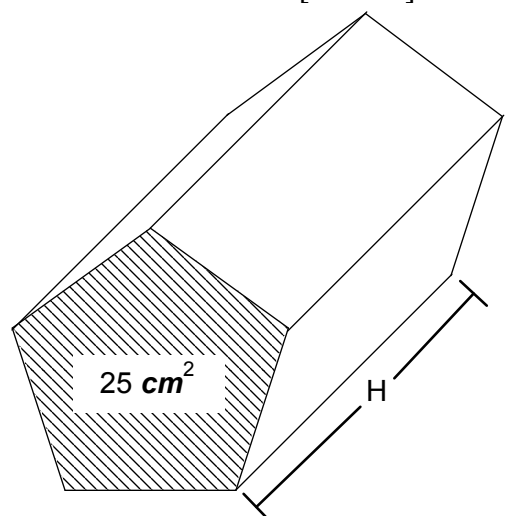
[3 Marks]

2. Sketch a model (i.e., Area Model, Counters, Number line, etc.) to calculate:

$$\frac{3}{4} \times \frac{1}{5}$$

[3 Marks]

3. The volume of the following right pentagonal prism is  $100 \text{ cm}^3$ . If the area of the base is  $25 \text{ cm}^2$ , what is the height of the object? [1 Mark]



4. A sample of coins from a piggy bank is shown:



A. The picture represents the ratio of all the coins in the bank. If there are 60 coins in the bank, how many are nickels? [2 Marks]

B. What is the ratio of toonies to quarters? [1 Mark]