Math Quiz #1 (2011 – 2012) Squares and Square roots Name: _____

Outcome A-1: Students will be able to identify perfect squares and square roots of whole numbers.
Outcome A-2: Students will be able to determine the approximate square roots of non-perfect squares.

Part One: Short Answer

1. Which ***one*** of the following numbers is a perfect square? **[A-1] 1 mark**

   a) 128 b) 625 c) 1026 d) 66

2. The length of the sides of a square with the area of 81 cm^2 is: **[A-1] 1 mark**

   a) 7 cm b) 9 cm c) 3.67 cm d) 20.25 cm

3. What is the area of each square with the following side lengths?

   a) 4cm b) 11cm **[A-1] 2 marks**

4. Write the 2 whole numbers closest to the square root of $\sqrt{39}$

   a) the 2 closest whole numbers are: ___ and ___ **[A-2] 2 marks**

5. The $\sqrt{89}$ is between what two numbers?

   a) 7 and 8 b) 8 and 9 c) 9 and 10 **[A-2] 1 mark**

6. In the space below, please ***draw and name*** the first 8 perfect squares. **[8 x 0.25 each = [A-1] 2 marks**

7. Calculate each:

$\sqrt{16 + 18 \div 2}$ $\sqrt{4 \times 6 + 12}$ $\sqrt{25 - 3 \times 3}$ **[A-1] 6 marks**

8. If "X" = 17, what does $\sqrt{8 + X}$ equal? **[A-2] 1 mark**

9. If "X" = 9, what does $\sqrt{18 - X}$ equal? **[A-2] 1 mark**

10. Determine the side length of the following square: **[A-1] 1 mark**

1640.25 meters squared

1 side = _____

11. Use any method to estimate the square root of the following: **[A-2] 6 marks**

$\sqrt{55}$ $\sqrt{94}$

[A-1] 13 marks
[A-2] 12 marks

Part One: /25 marks

Part Two: Constructed Response (Note: NO Calculators may be used for questions on this page)

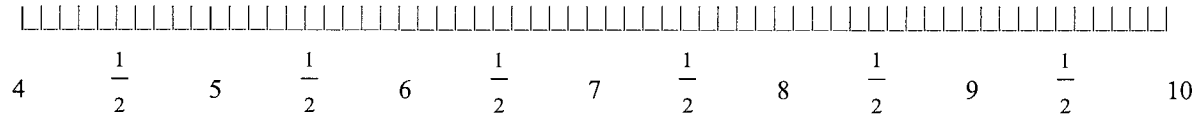
7. Using any method, **estimate the square root of either value** to the nearest tenth. *(Show or explain your thinking).*

$\sqrt{20}$ $\sqrt{89}$ **[3 marks A-2]**

8. Explain how you can show that 324 is a perfect square **using factors**? *(Show or explain your thinking).* **[3 marks A-1]**

9. Place each square root on the number line below to show its approximate value. **[3 marks A-2]**

$\sqrt{20}$ $\sqrt{34}$ $\sqrt{67}$



[A-1] 3 marks
[A-2] 6 marks
Part Two: /9 marks

Total Test Marks: /34

Grade 8 Math: Quiz #2 2011 Name:_____Class / Section: _____
(Outcomes: B-1 and review outcomes A-1, A-2, A-3)

1. Multiply the following values. Reduce your final answer to lowest terms. (B-1)

a) $2\frac{2}{5} \times 3\frac{1}{4} =$ _____

b) $\frac{2}{5} \times \frac{1}{3} \times \frac{3}{4} =$ _____

c) $4 \times \frac{3}{5} \times \frac{4}{7} =$ _____

d) $\frac{6}{9} \times 3 \times \frac{2}{8} \times 5 =$ _____

/4

2. Show cross-reducing or cross-cancelling to reduce the following examples to lowest terms. Lastly, after reducing, write the answer in simplest terms. (B-1)

a) $\frac{2}{3} \times \frac{6}{8}$ answer = _____

b) $\frac{17}{80} \times \frac{16}{51}$ answer = _____

c) $\frac{16}{21} \times \frac{9}{56}$ answer = _____

/3

3. Divide the following: (B-1)

a) $4\frac{3}{7} \div 1\frac{3}{8} =$

b) $2\frac{5}{12} \div 1\frac{1}{3} =$

/2

4. Please *multiply the following fractions pictorially* (as when we used graph paper or circles). **Be sure to show the single and double shading clearly**.

Finally, state the answer to the multiplication statement as it is shown in your diagram.

a) $\frac{1}{4} \times \frac{1}{2} =$ _____ (answer) b) $\frac{2}{3} \times \frac{1}{2} =$ _____ (answer)

Now please draw each equation pictorially using the space below. (B-1)

/5

5. Given the diagrams below, write the multiplication statement for each. Remember the fractions must appear in the equation in the correct order. (B-1)

a) b) c)

/3

6. Please divide the following fractions. Always reduce your answers to lowest terms. (B-1)

a) $\frac{6}{7} \div 4\frac{3}{4} =$

b) $4 \div \frac{2}{3} =$

/2

7. Blaise purchased a box of 8 wagon wheels for her daughter's math study group because she knew that they would be working on fractions. She explained that not everyone would receive a full wagon wheel. However, she explained that each person would be able to receive $\frac{2}{3}$ of one whole wagon wheel. How many students were in the study group? Please show all of your work. (B-1)

/2

8. After the dinner party, there was one third of a pumpkin pie left over. Later that night, grandpa snuck down to the kitchen and ate one quarter of the leftovers. What was left for the rest of the family the next day? Show your work please. (B-1)

/2

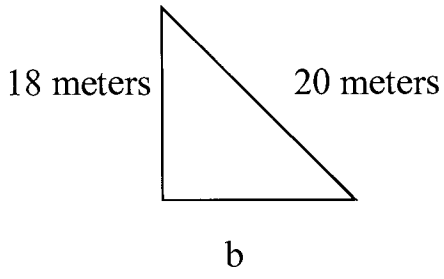
9. Calculate the average speed for the following distance driven.

$292\ \frac{1}{2}$ kilometers were driven in $4\ \frac{1}{2}$ hours. The average speed equals?

Use fractions please. (B-1)

/4

10. Find the length of the leg labelled b. Show your work please. (A-3)



/3

11. Please use BEDMAS to solve the following fraction equations. (B-1)

$\frac{3}{4} + \frac{1}{2} \div \frac{2}{3} \times 8$

$\frac{1}{2} - \frac{1}{3} \times \frac{1}{4} + \frac{1}{5} \div \frac{1}{6}$

/6

12. Which of the following numbers is not a square number? (A-1)

a) 36 b) 100 c) 20 d)121

/1

13. Write the whole numbers between 58 and 175 that are perfect squares. (A-1)

/3

14. Write the reciprocal for each of the following: (B-1)

a) $2\frac{9}{16}$ b) 44 c) $\frac{7}{8}$

/3

15. Estimate the square root of $\sqrt{90}$ to the nearest tenth. Show or explain your Reasoning. (A-2)

/2

16. An approximate square root of a whole number is 8.7. Is the whole number closer to 64 or 81? Explain how you know.

(A-2)

/2

17. What fraction completes the equation: (B-1)

$$\frac{?}{?} \times \frac{7}{8} = 1$$

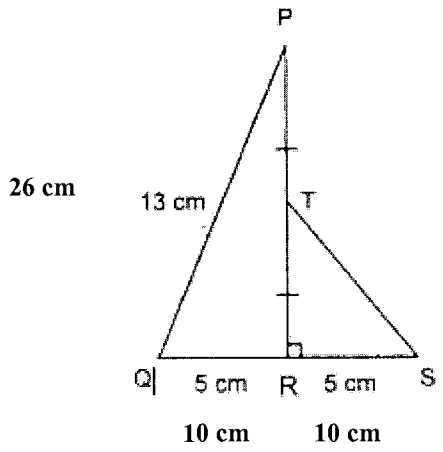
/1

18. Write a fraction that makes the equation true. (B-1)

$$2\frac{1}{2} \div \frac{?}{?} = 5$$

/1

19. In this diagram, PT = RT. What is the length of ST. Show your work. Give your answer to 1 decimal place. (A-3)



/4

20. Which 2 consecutive perfect squares does 39 fit between? (A-1)

a) 30 and 40 b) 36 and 49 c) 38 and 48

/1

Outcome Scores: B-1: ___/38 **A-1:** ___/5 **A-2:** ___/4 **A-3:** ___/7 **Total Score:** ___/54

Grade 8 Math: Quiz #3 2011 Name:_____Class / Section: _____
(Outcomes: B-2, C-1 and review outcome B-1)

Part B - Multiple Choice: *Circle the letter of the answer in lowest terms. (1 mark for each correct answer.)* **This portion of the test is to be written with a calculator.**

1. Which of the following is exactly equivalent to $\frac{7}{8}$? [C-1]

   a) 4% b) $87\frac{1}{2}\%$ c) 87% d) 875%

2. If 25% of a number is12, then 100% of that number is... [C-1]

   a) 4 b) 3 c) 36 d) 48

3. 20% of an unknown number is 15. The unknown number is... [C-1]

   a) 7.5 b) 75 c) 3 d) 300

4. A t-shirt that used to sell for $14.95 is now on sale for $8.97. What percent *of the original price* is the discount? [C-1]

   a) 6% off b) 50% off c) 60% off d) 66% off

5. As a *simplified* fraction, $5\frac{3}{5}\%$ is: [C-1]

   a) $\frac{56}{1000}$ b) $\frac{56}{100}$ c) $\frac{7}{125}$ d) $5\frac{6}{10}$

6. Your friend gives you 35% of 10 chocolate bars. How many chocolate bars did you get? [C-1]

   a) 3.5 bars b) 35 bars c) 350 bars d) 0.35 bars

7. In Manitoba the GST is 5%. What is the GST tax on an IPOD Touch that cost $220.00? [C-1]

   a) $1.10 b) $11.00 c) $110.00 d) $211.00

Part A - Multiple Choice: *Circle the letter of the answer in lowest terms. (1 mark for each correct answer.)* **This portion of the test is to be written without a calculator.**

1. The **simplified** answer for $4\frac{1}{2} \times \frac{4}{5}$ is: [B-1]

   a) $4\frac{4}{10}$ b) $4\frac{2}{5}$ c) $3\frac{6}{10}$ d) $3\frac{3}{5}$

2. The solution for $2\frac{2}{5} \div \frac{2}{5}$ is: [B-1]

   a) $2\frac{2}{5}$ b) $2\frac{4}{25}$ c) 3 d) 6

3. Calculate $\frac{6}{10} \div 6$. [B-1]

   a) $\frac{1}{10}$ b) $\frac{6}{60}$ c) 6 d) $\frac{1}{3}$

4. Calculate $\frac{2}{3} \div \frac{4}{5}$ [B-1]

   a) $\frac{8}{15}$ b) $\frac{10}{12}$ c) $\frac{4}{6}$ d) $\frac{5}{6}$

5. $\frac{2}{3}$ of a cup of flour is needed to make 1 batch of short bread cookies. How many cups of flour will he need if he decides to make 6 batches, one for each of his aunts? [B-2]

   a) $3\frac{3}{5}$ b) $4\frac{3}{5}$ c) 4 d) 3

6. A Grade 8 class raised $\frac{6}{8}$ of the money to support the school's winter production. The Grade 8 boys raised $\frac{10}{12}$ of the Grade 8 money. What fraction of the whole production fund in **simplest form** did the Grade 8 boys raise? [B-2]

   a) $\frac{40}{50}$ b) $\frac{4}{5}$ c) $\frac{40}{60}$ d) $\frac{2}{3}$

7. PE comprises $\frac{4}{5}$ of an hour each school day. How many hours of PE does a student have in 6 days or 1 complete school cycle? [B-2]

a) $\frac{4}{30}$ b) $\frac{20}{5}$ c) $3\frac{4}{5}$ d) $4\frac{4}{5}$

8. James needed $9\frac{3}{4}$ hours to complete his project. He worked on the project for $1\frac{1}{2}$ hours each evening. How many evenings did Jonathon take to complete the project? [B-2]

a) 6 b) 5 c) $5\frac{3}{4}$ d) $6\frac{1}{2}$

<u>Part B: Constructed Response</u> – Answer each question in the space provided.

1. The price of a new iPhone is decreased by 32%. If the regular price is $99.99, What is the sale price without tax? [2 marks C-1]

2. In 2006 the population of HGI school was 700 students. [2 marks C-1]

   a) In 2007, HGI's population increased by 12%. What is the new population?

   b) In 2008 the population again increased by another $4\frac{1}{2}$%. What is the population of HGI in 2008?

3. For a promotion, a store offers to pay the sales taxes on any item you buy. You are actually paying taxes, but they are calculated on a lower price.

   Suppose you buy an item for $150.00. The store pays the 12% sales tax.

   What is the true sales price of the item? [3 marks C-1]

Math Quiz #4 (2011 – 2012) Name: _____

Outcome C-2: Students will be able to demonstrate an understanding of Rate & Ratio.
Outcome C-3: Students will be able to apply ratios, rates and proportions to solve problems.
Outcome D-1: Students will be able to multiply and divide integers.

Part One: Short Answer

1. Which of these products are **negative**? **[1 mark D – 1]**

i) (-4)(-7) ii) (-5)(+2) iii) (+9)(-3) iv) (+8)(+4)

a) I and iv b) ii, iii and iv c) ii and iv d) ii and iii

2. Which quotients are **positive**? **[1 mark D – 1]**

i) (+36) ÷ (-9) ii) (+42) ÷ (+7) iii) (-45) ÷ (+5) iv) (-18) ÷ (-6)

a) ii and iii b) i and iii c) ii and iv d) i, ii and iv

3. Write the ratio 132:99:33 **in simplest terms**. **[1 mark C – 2]**

___ : ___ : ___

4. A boat is travelling at a speed of 35km/h. How far will the boat have travelled in $2\frac{2}{5}$ hours? **[1 mark C – 2]**

5. Write each as a **unit rate**: **[3 marks C – 2]**

a) Adam swims 12 laps in 6 minutes… calculate Adam's speed as a unit rate: _____

b) It costs $3.70 for 2 kg of peaches…. write the unit cost: _____

c) Tiles are on sale for $281.25 for 22.5 meters squared… write the unit cost: _____

6. **Fill in the missing terms** in each proportion statement: **[3 marks C – 2]**

a) $\frac{5.19}{8} = \frac{x}{11}$ b) $\frac{7}{9} = \frac{x}{12}$ c) $\frac{x}{3.25} = \frac{11}{5}$

7. A multiplication expression for (9) + (9) + (9) + (9) would be: **[1 mark D – 1]**

a) 49 b) (4) x (9) c) (-4) x (9) d) 36

Part Two: Application

1. Three men pool their money together to buy a hospital lottery ticket. The ticket is very expensive and not all of the men can afford to pay their equal share of the ticket purchase price. As a result, they agree to divide the prize money up according to the share of the ticket they each paid. The ratio **6: 2.50: 1.50** describes their shares of the ticket. Please calculate each person's respective winnings for each prize offered below. **[3 marks C - 3]**

Grand Prize = $10,000 2nd Prize = $2,500 3rd Prize = $500

2. Calculate each value correctly using BEDMAS. **[6 marks D - 1]**
Use steps to show your understanding.

a) $7 - (-12) \div (-3)$ b) $-15 - (-5) \times (-20) \div 2$ c) $6^2 - (3^2 + 3) \div 3$

3. For example, the number (7) can be represented using 7 happy faces: **[3 marks C – 3]**

Ie. **SEVEN** = ☻ ☻ ☻ ☻ ☻ ☻ ☻ **Note the ratio of letters to happy faces is 5:7**

a) Using the numbers 1 to 12, **for what number** is the ratio of letters to happy faces equal to 1:1?

b) Using the numbers 1 to 12, find **2 numbers** that have a ratio of letters to happy faces of 1:2.

4. Which is the better buy? Use calculations to justify your answer. **[4 marks C – 3]**

i) Two 2-litre bottles of root beer for $3.78

OR

ii) 1200 ml bottle for $1.58

OR

iii) One 24 – pack of 355 ml cans for $7.98

5. The three sides of a triangle are in the ratio of 6: 1 :3. If the triangle has a perimeter of 520 cm, how long is each side? **[3 marks C – 3]**

6. Place an integer into the ☐ to make the equation in question 6 true: **[1 mark D-1]**

$[\square + 3 \times (-1)] \div 3 = 5$

7. Place the missing operation (ie. +/ - / x / ÷) into the ☐ to make the equation in 7 true: **[1 mark D-1]**

$-4 \ \square 3 \ \square (-6) = 2$

8. Determine the missing term. **[1 mark C – 3]**

4 trucks have 72 wheels : 8 trucks have ☐ wheels.

a) 122 b) 129 c) 144 d) 135

9. Complete the ratio table: **[2 marks C – 3]**

Boys	1	10	20		
Girls	2			18	50

10. On a hike, Dilan walked 15 km in 6 hours. How far would he walk in two hours at that speed? Create a proportion statement using an unknown variable, then solve for the unknown. **[2 marks C – 3]**

$$\frac{\square}{\square} = \frac{\square}{\square}$$

11. Park rangers captured, tagged, and released 60 grizzly bears. A month later, the rangers captured 15 bears, 3 of which had tags. Estimate the park's grizzly bear population. Explain. **[2 marks C – 3]**

12. Write each ratio in simplest terms: **[4 marks C – 2]**

a) 40:16:72 b) 27:72:18 c) 132:99:33 d) 20:32:88

_____ _____ _____ _____

13. Complete the equivalent ratios: **[3 marks C – 2]**

a) 6: 6: 4 = ☐: ☐: 2

b) 12: 8: 4 = ☐: 6 : ☐

c) 24 : 30: 36 = ☐: 5 : ☐

14. Evaluate: Use steps to show your understanding. **[4 marks D – 1]**

a) (-3)(+2)(-2) b) $\frac{(+4)(-3)}{-2}$ c) (+6)(-2)(-2)(-1) d) $\frac{[(-4)(-2)+2]}{-2}$

[15 marks C – 2] = ___/15 [20 marks C – 3] = ___/20 [15 marks D-1] = ___/15 Total: ___/50

Patterns & Relations (Algebra) Quiz 2012

Name: _____
Section: _____

Multiple Choice/ Short Answer:

1. An algebraic expression for the following statement:
"A number is multiplied by three and decreased by two" should be expressed properly as: [E-1] 1 mark

a) 3(x-2) b) $3x - 2$ c) $(x - 2)^3$ d) $\frac{x-2}{3}$

2. Choose a math expression to represent: **" 5 more than twice a number".** [E-1] 1 mark

a) $2x + 5$ b) $2x - 5$ c) $\frac{x}{2} + 5$ d) $2(x + 5)$

3. Frank has $2\frac{2}{5}$ pies to share equally among 10 people. What fraction of a pie does each person receive? [B-1] 1 mark

a) 24 b) $\frac{6}{25}$ c) $\frac{12}{50}$ d) $\frac{1}{5}$

4. Solve: $3\frac{2}{3} \times 2\frac{2}{5} =$ [B-1] 1 mark

a) $8\frac{4}{15}$ b) $6\frac{4}{15}$ c) $8\frac{4}{5}$ d) $6\frac{4}{5}$

5. For the equation "$y = x - 5$", find the missing value in each ordered pair below: [E-2] 2 marks
a) (3, __) b) (__ , 1)

6. Determine which equation/expression below accurately represents the following situation: [E-1] 1 mark
"The sum of a number and eleven is divided by three".

a) $11 + \frac{n}{3}$ b) $11 + n = 3$ c) $\frac{(11+n)}{3}$ d) $n + \frac{11}{3}$

7. The solution to the equation $2x - (-5) = -7$ is: [E-2] 1 mark
a) -1 b) 1 c) -6 d) 6

8. The solution to the equation $3x - 4 = 32$ is: [E-1] 1 mark
a) -12 b) 108 c) 10 d) 12

9. The solution to the equation $\frac{x}{2} - 22 = 4$ is: [E-1] 1 mark

a) – 52 b) 30 c) -30 d) 52

10. Expand: $-4(x - 3)$ [E-1] 1 mark

a) $-4x - 12$ b) $-4x + 12$ c) $4x - 12$ d) $-4 - x - 3$

Constructed Response:

11. ***Write the algebraic equation*** which properly describes each sentence below. [E-2] 3 marks
Use the variable "N" to represent the unknown value.

a) The difference between nine times a number and five is fifteen.

b) Triple a number increased by seventeen gives the sum of the same number and twenty.

c) The quotient of a number divided by six is equal to the same number increased by twelve.

12. ***Complete this table of values*** for the relation " y = 2x - 3" [E-2] 2 marks

x	–3	–2	–1	0
y				

13. ***Solve*** the following: $2\frac{9}{12} \div 1\frac{1}{4} =$. **Show all work please and reduce.** [B-1] 3 marks

14. Please ***complete the ordered pairs*** relating to the linear equation: y = 9x – 7 [E-2] 4 marks

(1, __), (2, __), (__, 20), (__, 29)

15. ***Solve and verify using substitution***. Show all steps/work. [E-1] 12 marks: 3 marks solve + 3 marks verify (each)

a) -2x – 4 = -14

b) $-12 + \frac{x}{5} = 11$

Application:

16a. The sum of 3 numbers is 81. The second number is four times the first number and the third number is 3 more than the first number. ***Create*** an algebraic equation, then ***solve*** showing all steps. [E-1] 4 marks

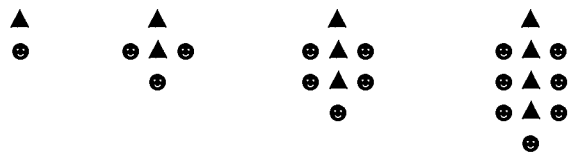
16b. For the equation above, how can you ***check*** your answer to see if the problem has been solved correctly? [E-1] 2 marks

17. ***Create and solve your own 2-step equation*** in which the *unknown variable in your equation is a mixed number.* [E-1] 3 marks

18. Take a look at the pattern below. [E-2] 9 marks

Continue the pattern and **draw the next figure correctly**. (1 mark)
Complete the t-chart. (2 marks)
Solve and verify the equation that relates the number of triangles to the number of smiley-faces. (3 marks)
Create a labeled graph representing the (correct) equation. (3 marks)

# of triangles (t)	1	2			
# of smiley-faces (s)	1		5		



Outcome B-1 ___/5 Outcome E-1 ___/27 Outcome E-2 ___/21 Total: ___/53

Math Quiz #6 (2011 – 2012)

Name: _____

Review outcomes:

A-3 Students will be able to apply the Pythagorean relationship to solve problems.

C-3 Students will be able to apply ratios, rate and proportions to solve problems.

D -1 Students will be able to multiply and divide integers.

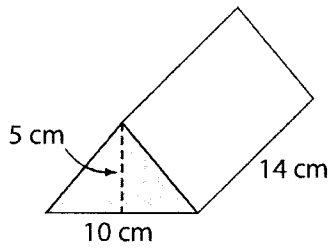
E- 1 Students will be able to solve for x in an equation.

New Outcomes:

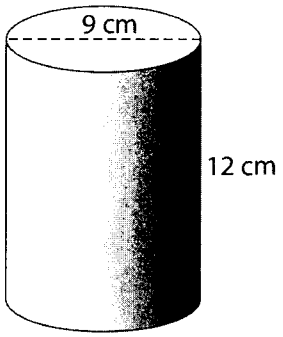
F-1 Students will be able to draw and construct nets for 3-D objects.

F-2 Students will be able to find the surface area of 3-D objects.

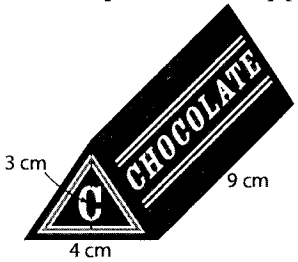
1. Please draw & label the NET for this triangular prism. Then calculate the surface area. **[2 marks F-1]**
   Please calculate the unknown dimension to the nearest tenth. **[3 marks F-2]**
   [1 mark A-3]



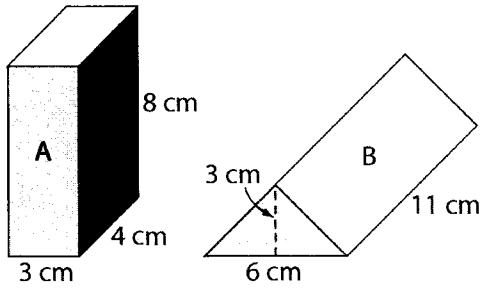
2. Please draw & label the NET, then calculate the surface area of this cylinder. **[2 marks F-1] [3 marks F-2]**



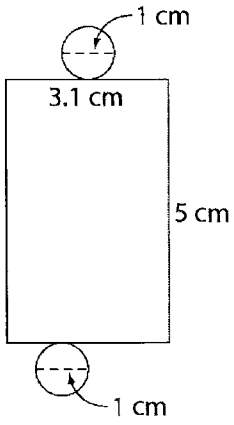
3. Use Pythagorean theorem to find the unknown side of the triangle. Calculate the total surface area.
   Please calculate the unknown dimension to the nearest tenth. **[3 marks A-3] [3 marks F-2]**



4. Which object has the greater surface area? Please calculate the unknown dimension to the nearest tenth.
[7 marks F-2] [1 mark A-3]

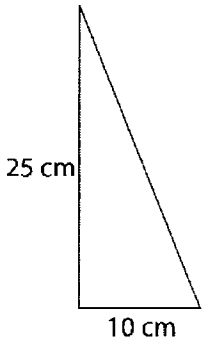


5. Determine the surface area of the cylinder using this net. **[2 marks F-2]**



6. Joe is painting the walls and ceiling of his room, which is 3.9 m long, 3.5 m wide, and 2.5 m high. The window is 60 cm long by 40 cm wide. The door is 2 m high by 85 cm long. Determine the surface area of the walls to be painted in meters. **[5 marks F-2]**

7. Draw a net for a box that would just hold one stacked pile of 20 triangular floor tiles that are 4 mm thick. The box has to be the same shape as the tiles it holds. Please calculate the unknown dimension to the nearest tenth. **[2 marks F-1]**
[1 mark A-3]



8. The legs of a right triangle are 7.0 cm and 10.0 cm. How long is the hypotenuse, to one decimal place? **[2 marks A-3]**

9. Which set of numbers is a Pythagorean triple? **[1 mark A-3]**

a. 3, 4, 5 c. 5, 7, 10
b. 7, 8, 9 d. 10, 13, 15

10. Which proportion could you solve to complete the diagram? **[1 mark C-3]**

3 oranges	6 apples
○ ○ ○	● ● ● ● ● ●
9 oranges	apples
○ ○ ○ ○ ○ ○ ○ ○ ○	

a. 3:□ = 6:9 c. 3:6 = □:9
b. 6:3 = 9:□ d. 3:6 = 9:□

11. Determine the missing term in the proportion. 5:□ = 60:120 **[1 mark C-3]**

a. 3 c. 16
b. 10 d. 22

12. What are the missing values in the ratio table? **[2 marks C – 3]**

Days in one week	7		63
School days in one week	5	25	

13. Calculate the unit cost to the nearest penny. $2.50 for 1.75 L of juice. **[1 mark C – 3]**

14. Determine the missing term. In 7 h, you drive 665 km. In 3 h, you drive ☐ km. **[1 mark C – 3]**

15. Complete the equivalent ratios: **[3 marks C – 3]**

a) 6: 6: 4 = ☐: ☐: 2

b) 12: 8: 4 = ☐: 6 : ☐

c) 24 : 30: 36 = ☐: 5 : ☐

16. The three sides of a triangle are in the ratio of 6: 1 :3. If the triangle has a perimeter of 520 cm, how long is each side? **[3 marks C – 3]**

17. Evaluate: Use steps to show your understanding. **[4 marks D – 1]**

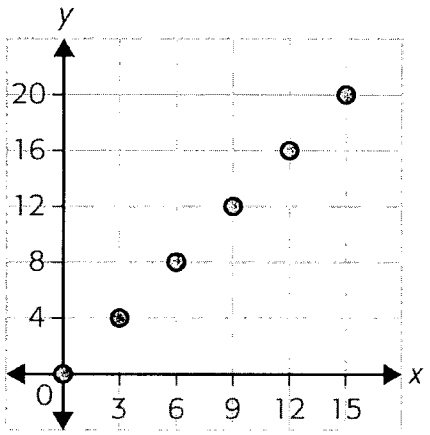
a) (-3)(+2)(-2)

b) $\frac{(+4)(-3)}{-2}$

c) (+6)(-2)(-2)(-1)

d) $\frac{[(-4)(-2)+2]}{-2}$

18. ***Select the equation*** that matches the graph. To do this, ***create a table of values for "x" & "y"***, then ***verify your equation is correct*** by substituting the first 3 values from your table of values. **[3 marks E-1]**



a. $y = 4x + 5$ c. $y = \frac{x}{2}$

b. $y = 4\left(\frac{x}{3}\right)$ d. $y = 3x + 2$

19. Solve: $\frac{x}{3} + 12 = y$, when $y = 16$. **[2 marks E-1]**

20. ***Write an equation*** for the following statement: k is equal to half of a number added to five times the number. Use n to represent the number. **[1 mark E-1]**

21. Solve $5(x + 1) = y$ when $y = 60$. **[3 marks E-1]**

22. Shirley is planning a party. The food will cost $6 per guest and the cake will cost $21. ***Write an equation*** to figure out the cost of the party for any number of guests. ***Create a table of values*** to show the cost of the party ***for 5 to 8 guests***. **[3 marks E-1]**

A-3: ___/9 C-3: ___/12 D-1: ___/4 E-1: ___/12 F-1: ___/6 F:2: ___/23 Quiz total: ___/66