



ANSWER SHEET
Grade 8 Mathematics
June 2011

Name: _____

Section B: Calculator

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Teacher use only			
Selected Response:		/30 Marks	
Constructed Response:		/30 Marks	
Total:		/60 Marks	
Section A	Section B	Exam Total	Percentage
/20	/60	/80	/100



NAME: _____

Grade 8 Mathematics

Final Examination

June 2011

Section B

Calculator Permitted	Selected Response	30 Marks
	Constructed Response	30 marks

You will need a pencil/eraser for this section. You are **permitted** to use a calculator. You are permitted to use any math manipulatives that your teacher has used with you this year.

Questions 11- 40 (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 5 -14 (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.**

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	$SA = 2\pi r^2 + 2\pi rh$ or $SA = 2\pi r^2 + \pi dh$
Volume	$V = \text{Area of Base} \times \text{Height}$	
Pi	$\pi = 3.14$	

Section B – Selected Response: Shade the appropriate bubble on the bubble sheet.

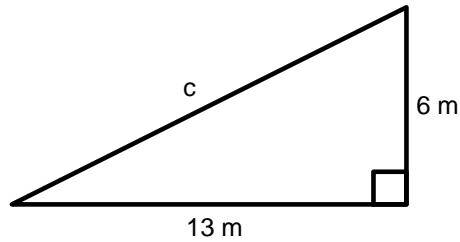
11. Which set of numbers could be the side lengths of a right triangle?

Set 1: 6, 24, 25 Set 2: 6, 8, 10 Set 3: 10, 20, 30 Set 4: 15, 15, 15

- A) Set 1
- B) Set 2
- C) Set 3
- D) Set 4

12. What is the value of c , in metres, rounded to one decimal place?

- A) 14.3
- B) 14.4
- C) 19.0
- D) 20.5



13. Which number sentence best describes this scenario:

A group of five friends owe a total of \$20. They agree to share the debt equally. What is each person's share of the debt?

- A) $\frac{(+20)}{(+4)} = (+5)$
- B) $\frac{(-20)}{(+4)} = (-5)$
- C) $\frac{(+20)}{(+5)} = (+4)$
- D) $\frac{(-20)}{(+5)} = (-4)$

14. At 7:00 am, the temperature in Wabush was -10°C . The temperature rises $+3^{\circ}\text{C}$ per hour over the next few hours. What is the temperature in degrees Celsius in Wabush at 11:00 am?

- A) -2
- B) -1
- C) $+2$
- D) $+12$

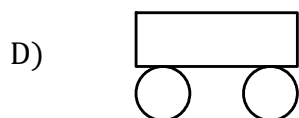
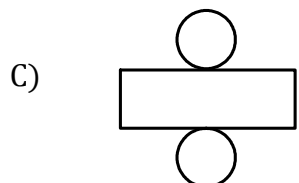
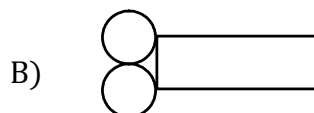
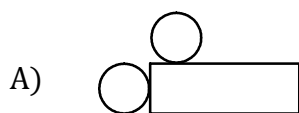
15. The table shows the nightly low temperatures, in degrees Celsius, in Makkovik for a week in May.

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
?	-4	-13	-5	+6	+6	-5

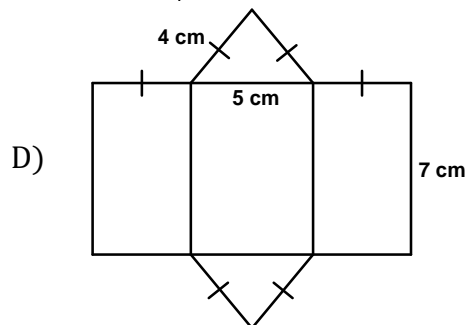
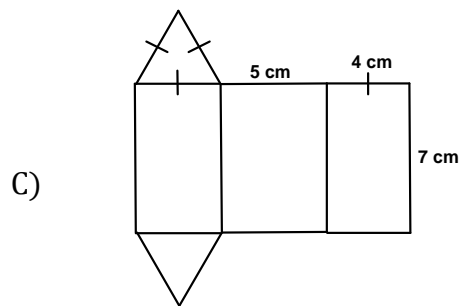
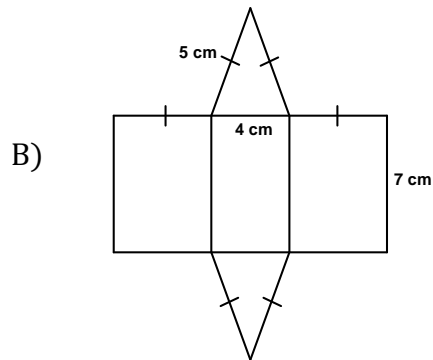
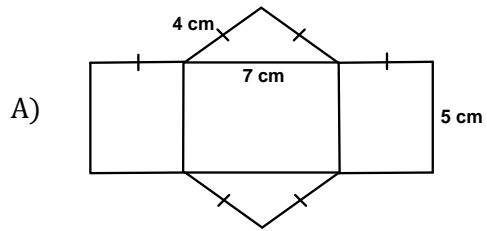
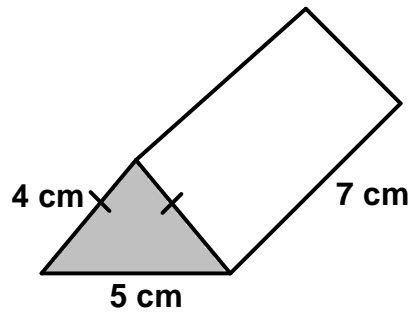
If the average low temperature for the week was -2°C , then what was the low temperature, in degrees Celsius, on Monday night?

- A) -15
 B) -14
 C) +1
 D) +2
16. Which equation is correct?
- A) $6 \times \frac{1}{4} = \frac{24}{1}$
 B) $8 \times \frac{1}{6} = \frac{6}{8}$
 C) $\frac{3}{4} \div 8 = \frac{32}{3}$
 D) $\frac{3}{4} \div 6 = \frac{3}{24}$
17. Gregg is awake for $\frac{2}{3}$ of the day. He spends $\frac{5}{8}$ of that time at home. How many hours of the day is Gregg awake at home? (1 day = 24 hours)
- A) 10
 B) 12
 C) 15
 D) 16

18. Which is the correct net for a cylinder?

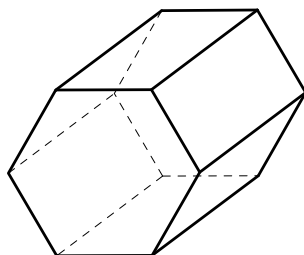


19. Which net is for this triangular prism?



20. How many faces does this right prism have?

- A) 2
- B) 4
- C) 6
- D) 8

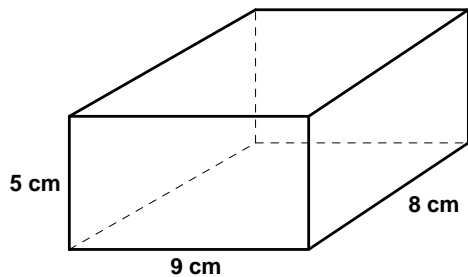


21. The edge of a cube is 8 cm in length. What is the surface area, in cm^2 , of the cube?

- A) 48
- B) 64
- C) 384
- D) 512

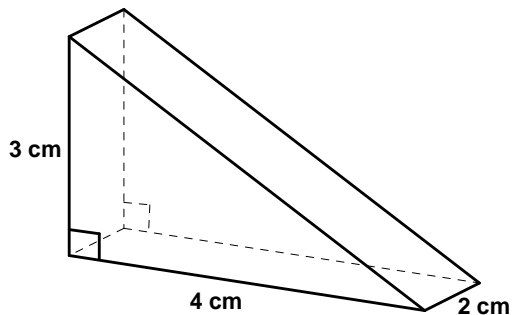
22. What is the surface area, in cm^2 , of this rectangular prism?

- A) 157
- B) 314
- C) 360
- D) 628



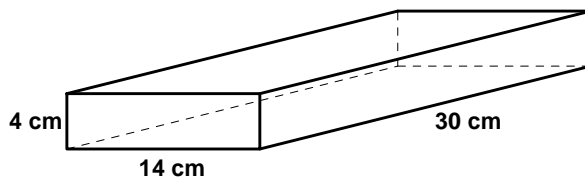
23. What is the surface area, in cm^2 , of this triangular prism?

- A) 12
- B) 30
- C) 36
- D) 48



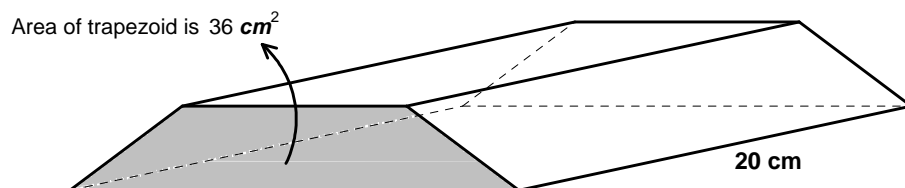
24. What is the volume, in cm^3 , of this rectangular prism?

- A) 840
- B) 1192
- C) 1680
- D) 3360

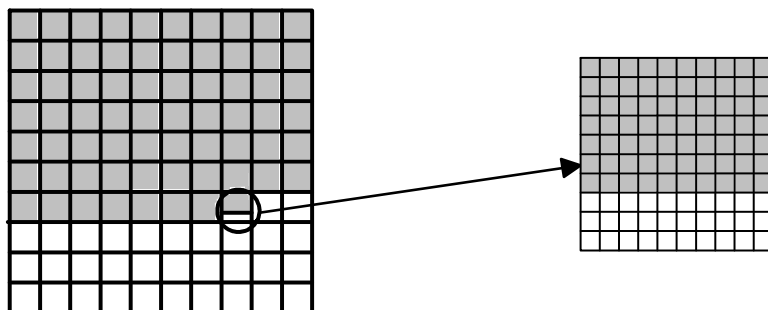


25. What is the volume, in cm^3 , of this prism?

- A) 360
- B) 720
- C) 1296
- D) 1440



26. What percent of the larger grid is shaded?



- A) 67.0 %
- B) $67.\bar{6}$ %
- C) 67.7 %
- D) 70.0 %

27. Which percentage is equivalent to $\frac{8}{1000}$?
- A) 0.8
 - B) 1.8
 - C) 8
 - D) 80
28. There are 16 people from Des's street in the local hockey league. They make up 8% of the league. How many people are in the league?
- A) 20
 - B) 24
 - C) 128
 - D) 200
29. A paint store mixes yellow and blue paint in the ratio 2:3 to make green paint. If they used 12 litres of yellow paint, how many litres of blue paint were used?
- A) 8
 - B) 18
 - C) 24
 - D) 60
30. Nicole earned \$116 in 8 hrs. At this rate, how much will she earn in 14 hours?
- A) \$145
 - B) \$174
 - C) \$203
 - D) \$232
31. Solve: $\frac{m}{7} - 4 = -7$
- A) $m = -77$
 - B) $m = -21$
 - C) $m = 21$
 - D) $m = 77$
32. Solve: $-16 = 3a - 11$
- A) $a = -9$
 - B) $a = -\frac{5}{3}$
 - C) $a = \frac{5}{3}$
 - D) $a = 9$

33. Which equation can be used to solve this problem?

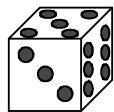
“Zoe works at a marina where boat servicing costs \$75.50 plus \$6.50 for each litre of oil. Zoe serviced Mr. Smith’s boat and charged him \$147.00. How many litres of oil did she use for his boat?”

- A) $75.50 = 6.50x + 147$
- B) $75.50 = 147x + 6.50$
- C) $147 = 75.50x + 6.50$
- D) $147 = 6.50x + 75.50$

34. What type of graph would you use to display DVD sales over a number of years?

- A) bar
- B) circle
- C) line
- D) pictograph

35. A regular die is rolled and a coin is tossed. What is the probability of rolling an even number and getting tails?



- A) $\frac{1}{12}$
- B) $\frac{1}{6}$
- C) $\frac{1}{4}$
- D) $\frac{1}{2}$

36. Jodie puts these lettered cards in a paper bag.



She selects a card without looking, replaces it, and selects another card without looking. What is the probability that she will choose A and then M?

- A) $\frac{1}{10}$
- B) $\frac{1}{5}$
- C) $\frac{7}{20}$
- D) $\frac{7}{10}$

37. This spinner is spun three times.



What is the probability of spinning black, then white, and then white again?

- A) $\frac{1}{54}$
- B) $\frac{1}{9}$
- C) $\frac{4}{6}$
- D) $\frac{5}{6}$

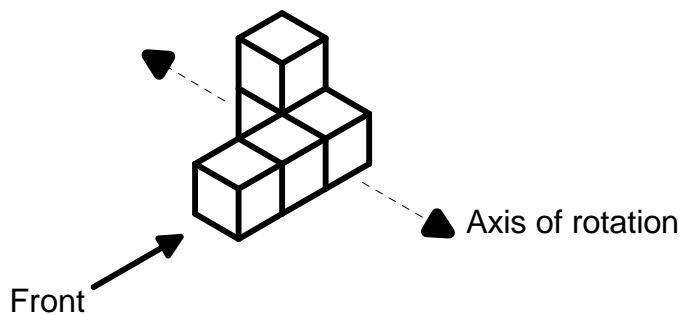
38. Which is used to produce this tessellation?

- A) enlargement
- B) reflection
- C) rotation
- D) translation

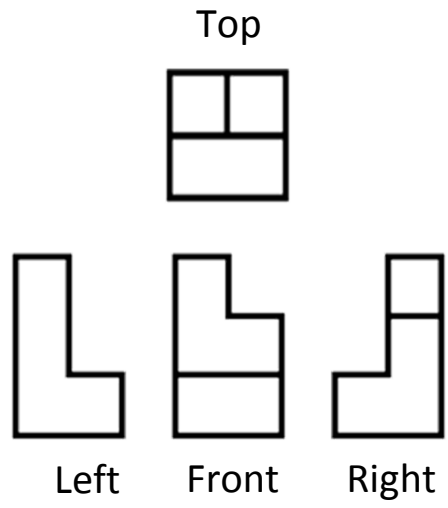
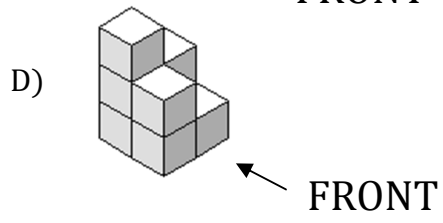
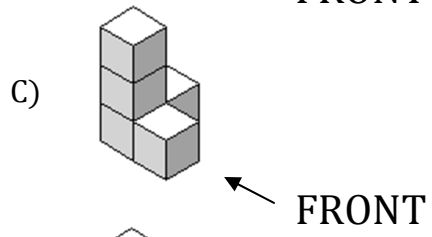
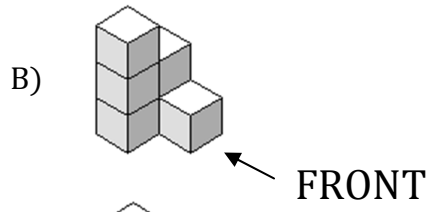
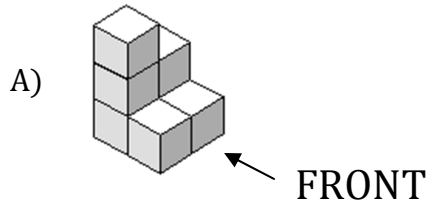


39. Which is the **front view** of the object after it has been rotated 90° towards you about the axis?

- A)
- B)
- C)
- D)

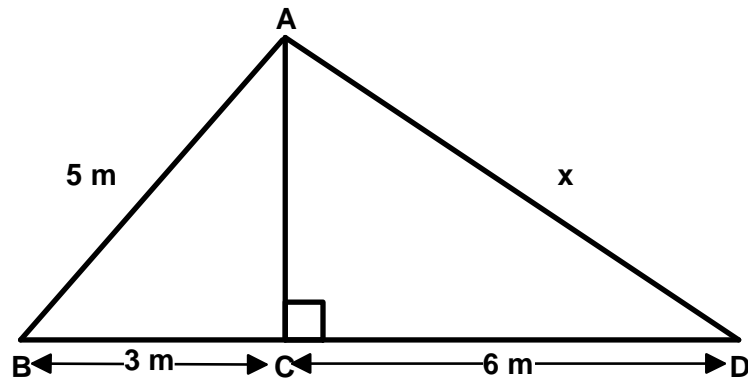


40. Which object matches the views indicated?



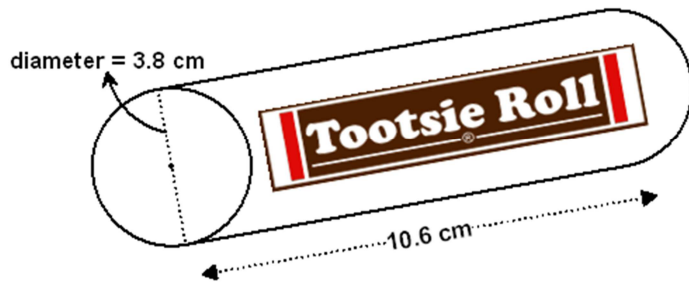
Section B : Constructed Response: Answers are to be done in the spaces provided.
Show all necessary workings.

5. Determine the length of AD to one decimal place. [3 Marks]



6. Calculate: $\frac{7}{10} + \frac{3}{5} \times \left(\frac{2}{3} \div \frac{1}{2} \right)$ [3 Marks]

7. How much chocolate can each container hold? Show your work. [3 Marks]



8. How much metal is used to create this tuna can? Show your work. [3 Marks]



9. Janine is purchasing a set of golf clubs that are priced at \$425.00. The salesman tells Janine that the clubs are on sale for 13% off, but she will still have to pay 13% tax. Janine thinks she will pay exactly \$425.00 for the set of clubs. Is she correct? Justify your answer. [3 Marks]

10. Fred found his favourite shampoo in two stores. The sizes and pricing are shown below. Which bottle is the better value? Show your work. [3 Marks]

A



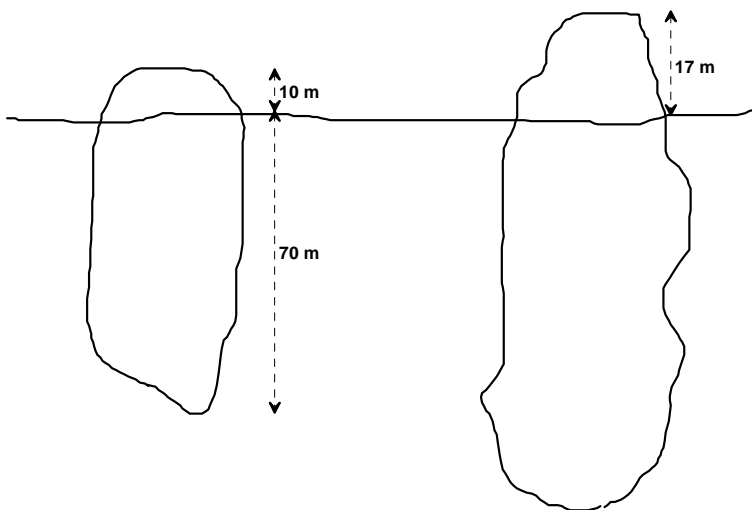
750 ml for \$3.00

B

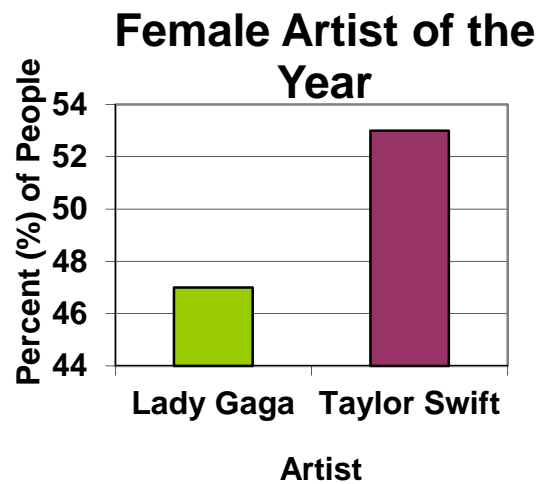


1 000 ml for \$4.20

11. An iceberg 80 m in length is 10 m above the water's surface and 70 m below the water's surface. What is the total length of a similar iceberg that rises 17 m above the water's surface? Show your work. [3 Marks]



12. The online voting results for a music award were displayed to the television viewing audience using this graph:



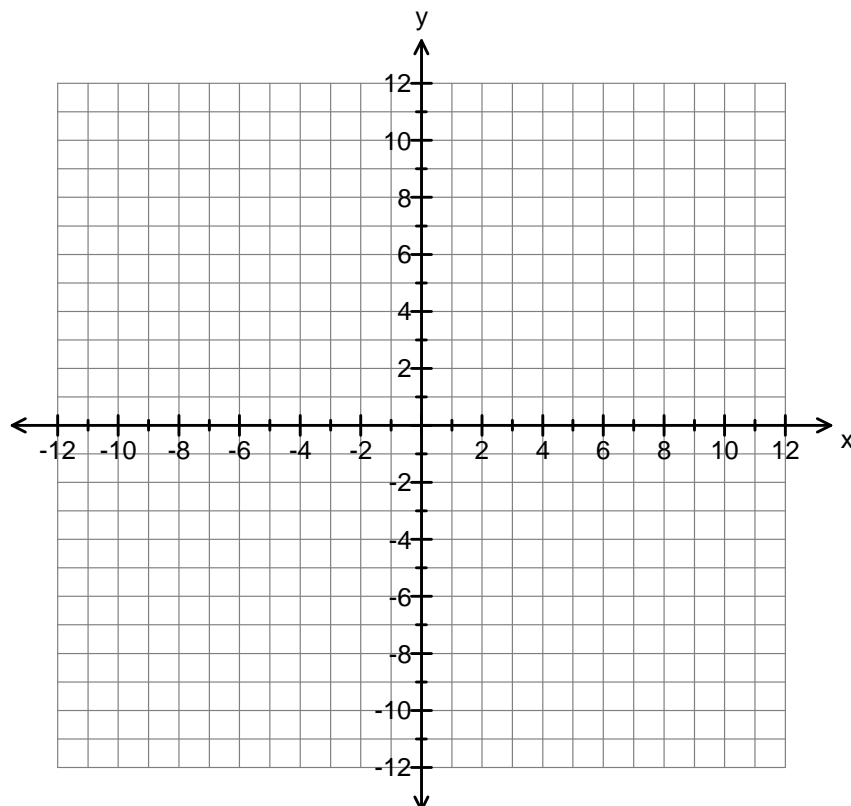
Is this a fair way of presenting the data? Briefly explain your answer. [2 Marks]

13. The equation of a linear relation is: $y = -2x - 3$

A. Complete this table of values for the relation. [1Mark]

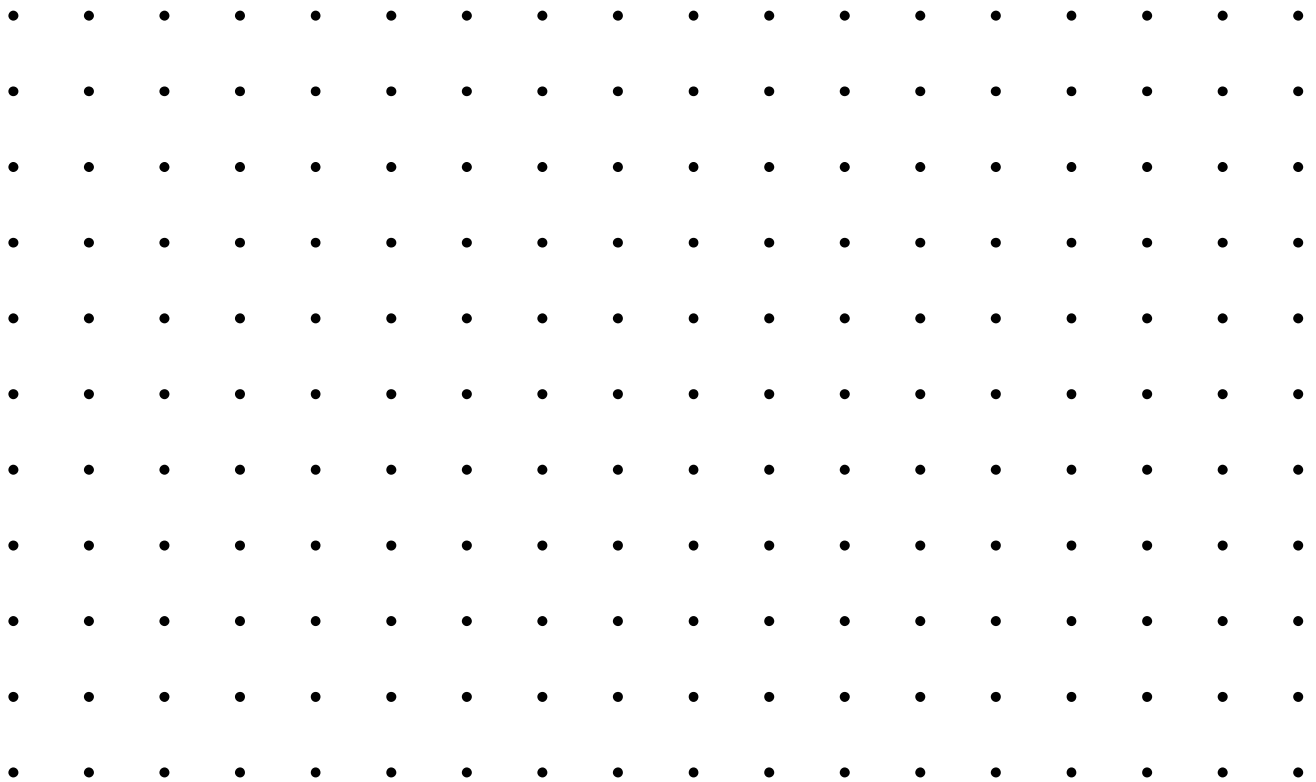
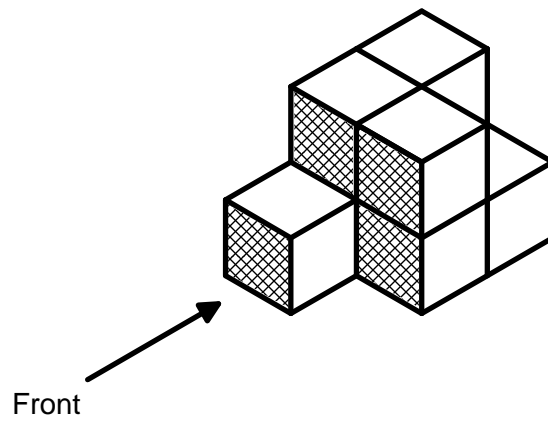
x	y
-7	
-2	
1	
4	

B. Graph the data from the table in part A on the grid below. [1 Mark]



14. Sketch and label the front, top, left side and right side views of the object.

[2 Marks]



15. Can you combine dodecagons with other regular polygons to create tessellations? Use the table below to help explain your answer.

[3 marks]

[3 Marks]

Regular Polygon	Interior angle measure
Triangle	60°
Square	90°
Pentagon	108°
Hexagon	120°
Octagon	135°
Decagon	144°
Dodecagon	150°