Grade 7 - Answer key

Worksheet 1

2. b – why she photographed the wolf

3.'There are disagreements ……..top predator.'

4. The order is 3, 4, 2, 1

5. a) of the next century

b) pack

6. individual answers

7. a) having talked to the experts, she now thinks

b) that the wolf was probably more afraid

c) than she was

8. whether mankind can exist together, increased losses of sheep and cattle, more attacks on dogs

9 a)Something that is stunning and amazing, unbelievable

b)Living together in harmony

10. a) damage attempts to replant forests

b) reduce bird numbers

c) compete for food with livestock

11. past – western world's top predators

Present – stopped killing, rather protection, returning to their areas

Future – whether mankind will be able to live with them

12. Individual answers include why they are returning, protection being lent, growing population, ……..

Worksheet 2

2. a)Sinister apparition crawling towards me - inauspicious looking structure coming towards me

b) Really a monstrous crab like creature – very big resembling a crab

c) Something threadlike - as thin as a thread

3. frightful, qualm

4. using the lever he placed a month between himself and the monsters quickly

5. desolate, harsh

6. 'Then I saw the thing was really a monstrous crab like creature.'

7. It refers to the antennae of the monster which he had caught. It was pulled out from his hand even before he realized what it was.

8. It was large, many legs, huge antennae, gleaming metallic eyes, corrugated back, greenish incrustation

9. It refers to the time machine, aliens, space travel and exploration. Fictional worlds

10. Individual answers

SEEDLING
THE WORLD SCHOOL

Consolidated Practice Worksheet No. 1 answer key (2019-20)

Name: _____Grade: VII Roll No:_____ Date: _____

1. As a part of environmental study, a supermarket conducts a survey to see how many plastic shopping bags each customer uses. The frequency table shows the results.

Number of plastic bags	Frequency	$x \times f$
0	15	0
1	18	18
2	25	50
3	10	30
4	5	20
5	2	10

a) How many customers were included in the survey?

15+18+25+10+5+2 = 75 75 customers

b) Calculate the range of the numbers of plastic bags used.

5 – 0 = 5 range = 5

c) Calculate the mean number of plastic bags per customer.

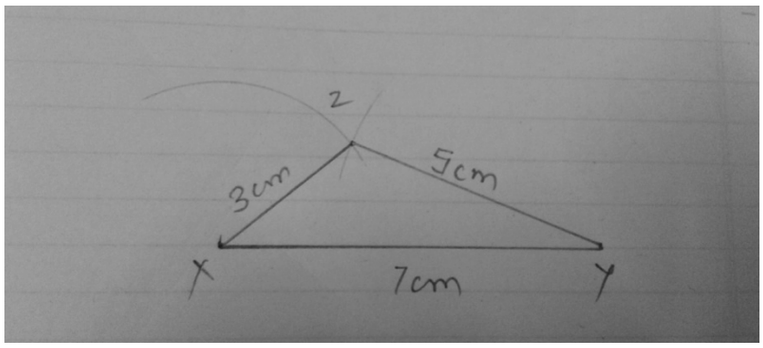
Total of $x \times f$ = 128 128÷75 = 1.71 mean = 1.71 plastic bags

d) Calculate the median number of plastic bags per customer.

$75 \div 2 = (37.5)^{th}$ item = 2 median = 2 plastic bags

2. Construct a triangle XYZ where XY= 7cm, XZ = 3cm and YZ = 5cm.

Use ruler and a pair of compasses.



(looks like this but accuracy to be checked)

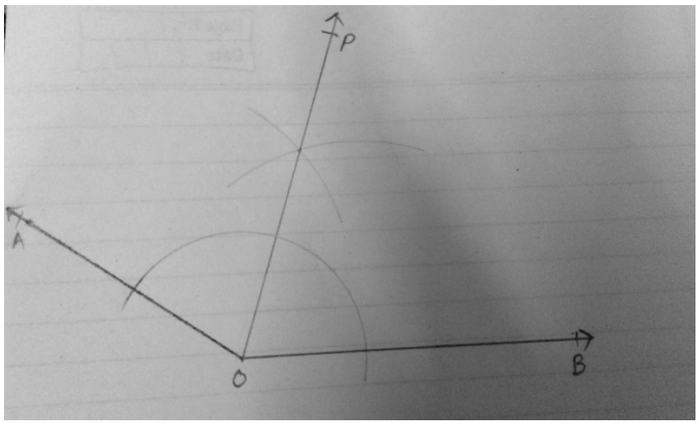
Measure accurately each of the angles X, Y and Z.

∠X= 39º ∠Y= 23º ∠Z= 118º (± ^{0} acceptable)

3. Draw an angle AOB of measure 144º using ruler and protractor.

Then draw its angle bisector using ruler and a pair of compasses.

Label the angle bisector as OP.



(looks like this but accuracy to be checked)

4. Complete this table for $y = -2x + 4$

x	-2	-1	0	1	3	4	6
y	8	6	4	2	-2	-4	-8

Working

x = -2 **x= 0** **x=1** **x=4**

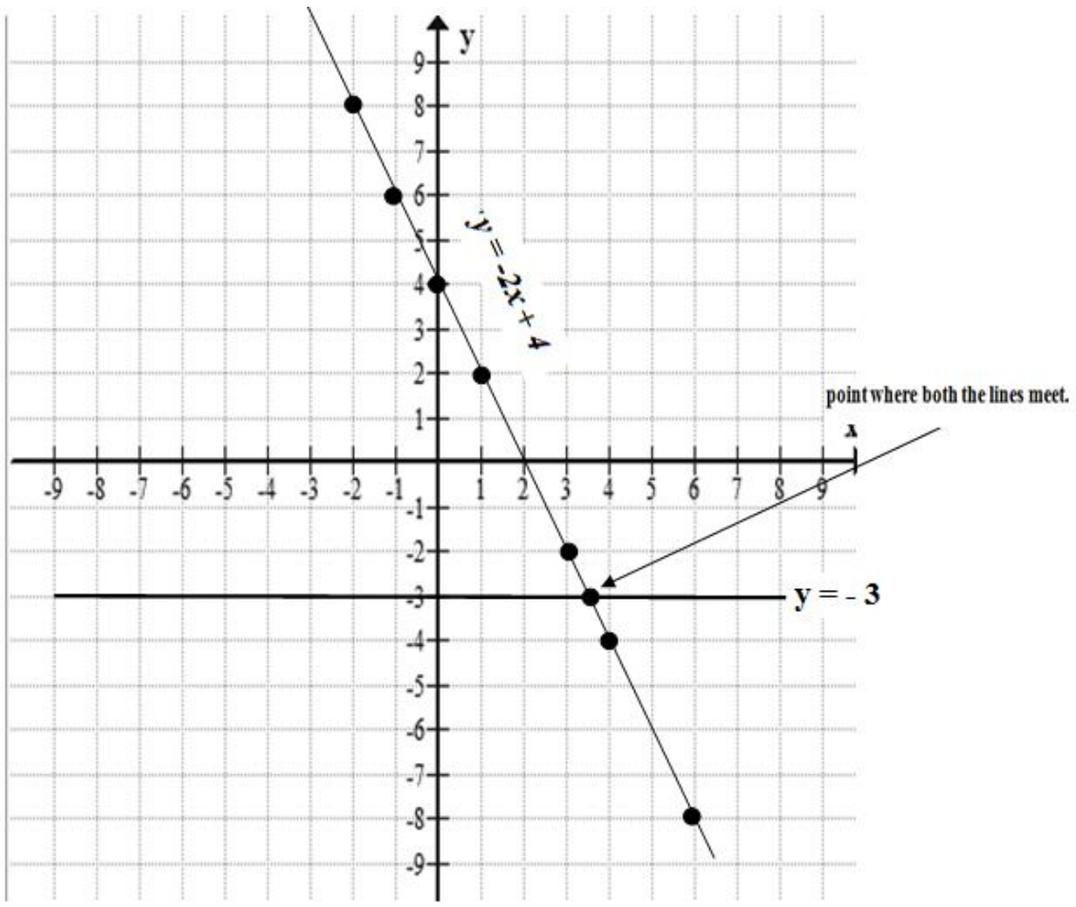
y = (-2× -2) +4 **y = (-2× 0) +4** **y = (-2× 1) +4** **y = (-2× 4) +4**

y = 4 +4 **y = 0+4** **y = -2 +4** **y = -8 +4**

y = 8 **y = 4** **y = 2** **y = -4**

x= 6 y= (-2× 6) + 4 y = -12 +4 y= -8

Now draw the graph for $y = -2x + 4$



Does the point (-9, 24) lies on the above line. Give reason for your answer.

No because when x = -9 y= (-2×-9) + 4 y= 18 + 4 y = 22

Also draw the line y = - 3 on the above graph.

Write the coordinates of point where both the lines meet. (3.5 , -3)

5. Find the midpoint of line segment between:

a) (-7, 13) and (-5, -11)

x coordinate =-7 + -5 = -12 ÷ 2 = -6 y coordinate =13 + -11 = 2 ÷ 2 = 1

midpoint (-6 , 1)

b) (15 , -25) and (-30 , 40)

x coordinate =15 + -30 = -15 ÷ 2 = -7.5 y coordinate =-25 + 40 = 15 ÷ 2 = 7.5

midpoint (-7.5 , 7.5)

6. a) a four –sided and a six- sided dice are rolled. Complete the two-way table to show all possible combinations.

		Dice 1			
		1	2	3	4
Dice 2	1	1,1	2,1	3,1	4,1
	2	1,2	2,2	3,2	4,2
	3	1,3	2,3	3,3	4,3
	4	1,4	2,4	3,4	4,4
	5	1,5	2,5	3,5	4,5
	6	1,6	2,6	3,6	4,6

What is the probability of:

b) getting a double 3 ? —

c) not getting a double 3? —

d) getting a total score of 6? — = –

e) not getting a total score of 6? — = –

f) getting an even number on both dice ? — = –

g) getting scores which differ by 2? — = –

h) getting a result in which the score on dice 1 is greater than that of on dice 2? — =–

7. A spinner with four colours – red, blue, yellow and green is spun 20 times. The result are as follows:

Colour	Red	Blue	Green	Yellow
Frequency	3	2	7	8

What is the experimental probability of getting:

a) red colour ? —

b) yellow colour ? — = –

The spinner is spun 80 more times and the results are as follows-

Colour	Red	Blue	Green	Yellow
Frequency	20	22	19	19

Now calculate experimental probability of getting red colour based on 100 spins.

Which sets of results is likely to be more accurate? 20 spins or 100 spins

100 spins

Give reason for your answer.

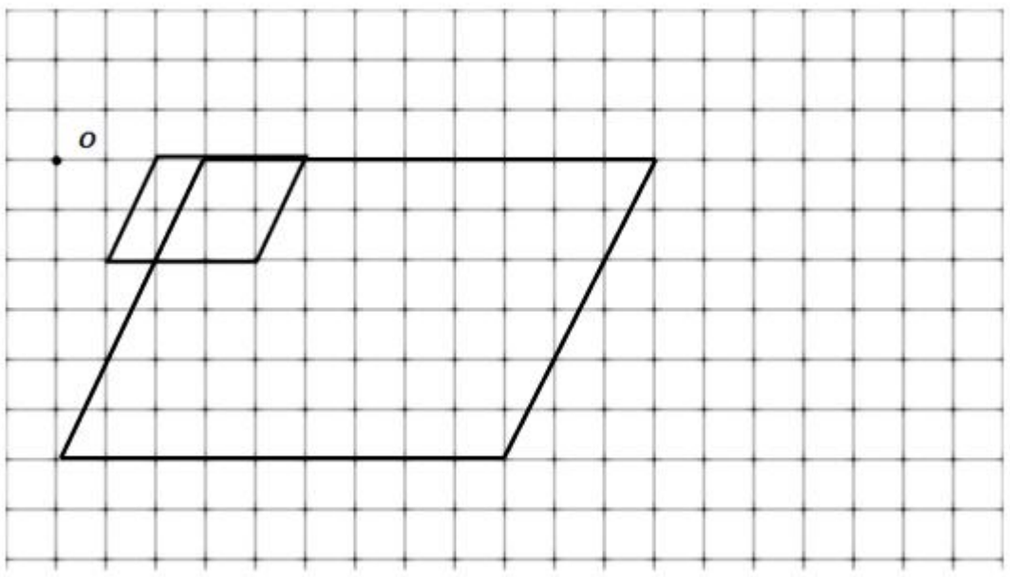
Because greater the spins, greater the accuracy.

Is the spinner biased or fair? Explain your answer.

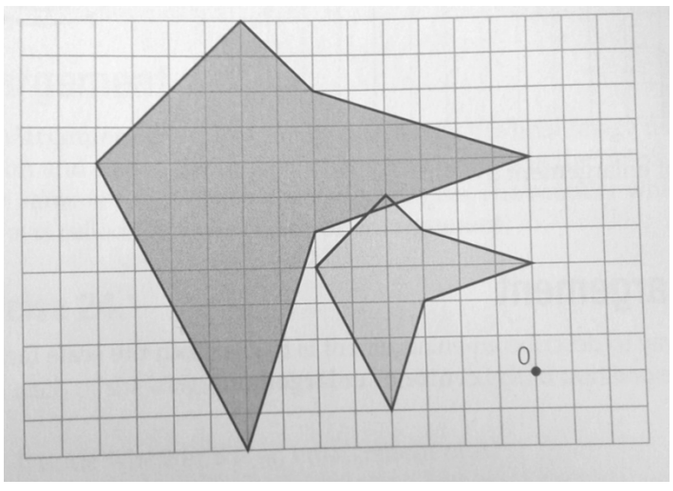
Spinner is fair because after 100 spins each colour is close to 25 frequency.

8. a) Enlarge the given shape by the given scale factor of enlargement and from the centre of enlargement *O*.

Scale of enlargement 3



b) For the given figure, where the larger shape is an enlargement of the smaller one from the centre of enlargement *O*. Find the scale factor of enlargement.



Scale factor = 2

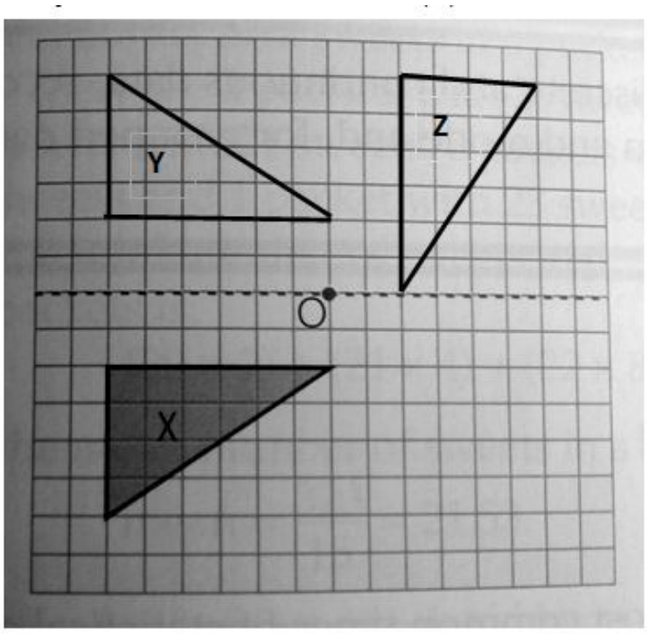
9. The shape X undergoes two transformations .

The first transformation maps X on to an image Y , the second maps Y on to an image Z.

Follow the instructions and draw images Y and Z. Label them clearly.

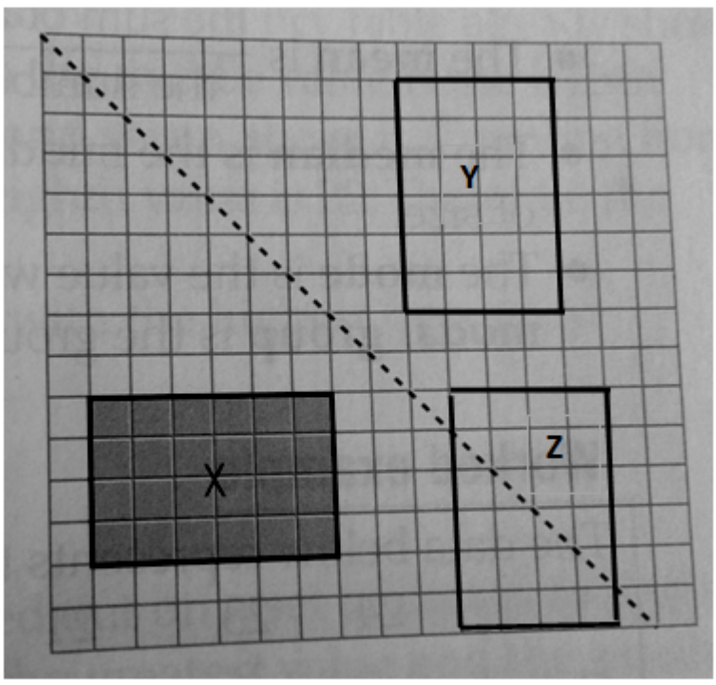
a) First reflect in mirror line (Y)

then rotate by 90° clockwise about *O* (Z)



b) First reflect in mirror line (Y)

then translate by 1 square right and 8 squares down (Z)



Consolidated Practice Worksheet No. 2 answer key (2019-20)

Name: _____Grade: VII Roll No:_____ Date: _____

1.

a) Work out the answers.

- 6 – 7 = - 13 **8 – 11 = - 3** **5 – - 9 = 14**

9 + - 4 = 5 **-12 + - 20 = - 32**

-6 × -9 = 54 **7 × -11 = - 77** **-12 × 5 = - 60**

14 ÷ -2 = -7 **-72 ÷ -3 = 24** **-32 ÷ 4 = - 8**

= 4×4×4×4×4 = 1024 **= 2×2×2×2×2×2×2×2 = 256**

$\sqrt{}$ **= 6** $\sqrt{}$ **= 12**

b) Find highest common factor of 6, 9 and 36

3

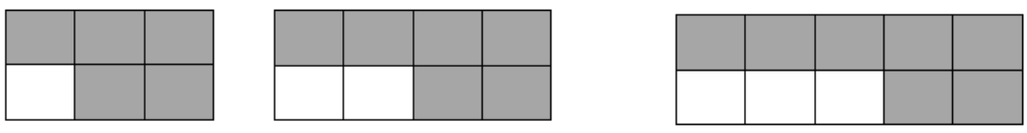
c) Find lowest common multiple of 3, 5 and 15.

15

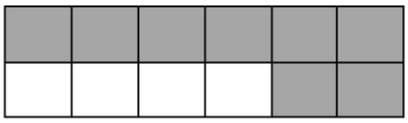
d) Write two prime number that add up to 48.

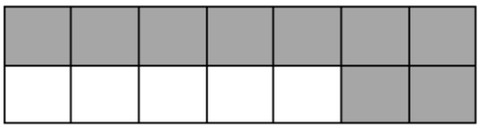
41 and 7 (other answers possible)

2. These diagrams show the first three patterns in a sequence of growing tile patterns.



a)Draw next two diagrams in the sequence.





b) Complete this table.

Number of white squares	**1**	**2**	**3**	**4**	**5**
Number of grey squares	**5**	**6**	**7**	**8**	**9**

c) Describe the term to term rule for the number of grey squares.

Add one

d) Describe the position to term rule linking the number of white squares (p) to the number of grey squares (n).

n= p+4

e) Use your rule in part d) to find the number of grey squares in a pattern with

100 white squares.

n = 100 + 4 = 104 **104 grey squares**

3. a) Round the number 18.295

to nearest whole number 18

to nearest one decimal place 18.3

to nearest two decimal places 18.30

b) solve mentally

2260 × 0.1 = 226 **0.43 ÷ 0.01 = 43**

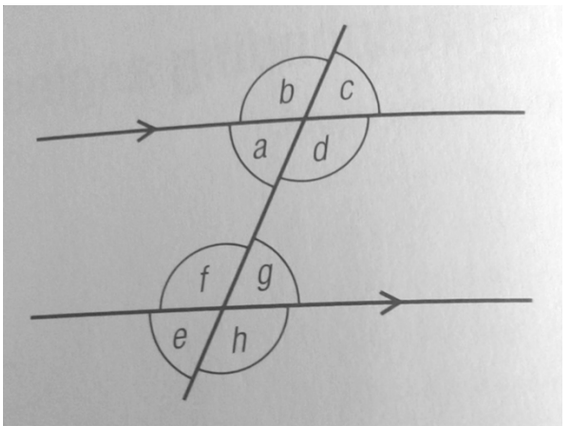
c) Circle the greater quantity or value in each box.

25 m	**23000mm**
5.63 + 23.1	**29 – 0.08**
300 kg	**0.4 tonnes**

4. Fill in the blank.

105 miles = 168km **208 km = 130 miles**

5. a) Write either 'alternate' , 'corresponding' or 'vertically opposite' to complete each of the following sentences.



Angles *e and g* are <u>vertically opposite</u>

Angles *g and c* are <u>corresponding</u>

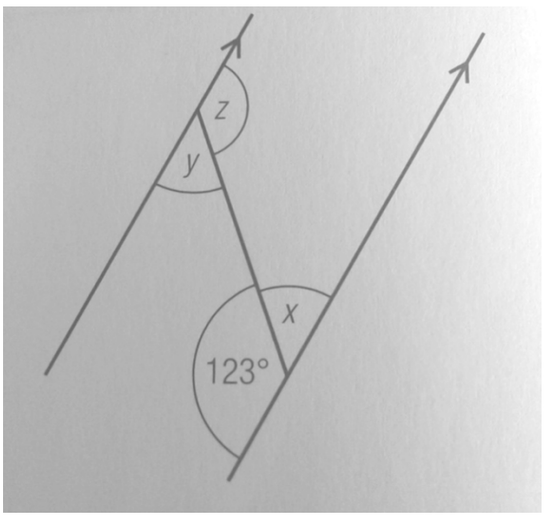
Angles *h and f* are <u>vertically opposite</u>

Angles *h and d* are <u>corresponding</u>

Angles *d and f* are <u>alternate</u>

b) Find the value of unknown angles in these diagrams .

Give reasons for your answer.



***x* = 57°**

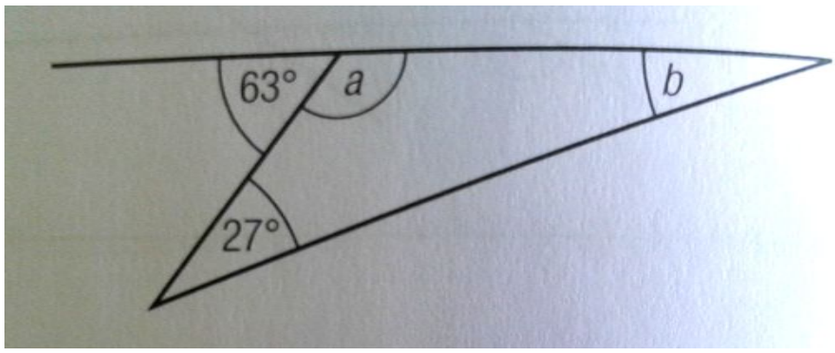
Reason 123 + x = 180°

***y* = 57°**

Reason x and y are alternate angles

***z* = 123°**

Reason 123° and z are alternate



a **= 117°**

Reason 63 + a = 180° straight line angle

b **= 36°**

Reason 27 + b = 63° exterior angle property of triangle

6. Work out the following. Simplify your answers where possible.

a) $-\frac{}{} + -\frac{}{} = \frac{}{} + \frac{}{} = \frac{}{} = 1\frac{}{}$

b) $3-\frac{}{} - 2-\frac{}{} = \frac{}{} + \frac{}{} = \frac{}{} - \frac{}{} = -\frac{}{}$

c) $24 \div \frac{}{} = 24 \times \frac{}{} = 36$

d) $15 \times -\frac{}{} = \frac{}{} = 5-\frac{}{}$

7. Expand the expressions.

i) $2a(2b + 3) = 4ab + 6a$

ii) $4b(6b - 2a) = 24b^2 - 8ab$

8. Solve the following equations. (find value of variable)

i) $8d = 4d - 9$

$8d - 4d = -9$

$4d = -9$

$d = -9 \div 4$

$d = -2.25$

ii) $4(h + 1) = 12$

$4h + 4 = 12$

$4h = 12 - 4$

$4h = 8$

$h = 8 \div 4$

$h = 2$