

# Play with Poems

A **poem** is an arrangement of words into stanzas. The person who writes poems is called a **poet**. Play this board game on poems with a friend. Begin from 'Start', use the picture clues on the way to name the poem. The one who reaches 'Finish' first is the winner.



↑ CLASSROOM DISPLAY PULLOUT ↑



1   
 Robert Frost

2   
 Robert Louis Stevenson

3   
 Christina Rossetti

4   
 Lewis Carroll

5   
 Charles and Mary Lamb

6 

**MOTIONS OF THE EARTH**

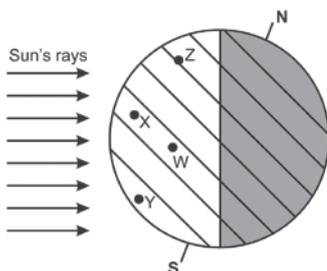
Tick (✓) the correct answer

- The Earth spins at a constant and regular speed. How long does it take for the Earth to make one complete rotation?
  - 24 hours
  - 24 days
  - 365 hours
  - 365 days
- Scientists describe the Earth as having an imaginary line passing through it from pole to pole, on which the Earth spins. What is this imaginary line called?
  - Axis
  - Equator
  - Plane
  - Satellite
- One Earth day is 24 hours. Some planets have shorter days. Other planets have longer days. What determines the length of a planet's day?
  - Moons
  - Revolution
  - Rotation
  - Tilt
- A person living on the Earth sees daytime and night time every 24 hours. Which of these is responsible for changes from daytime to night time on Earth?
  - Earth's tilt
  - Earth orbiting the Sun
  - Moon orbiting the Earth
  - Earth rotating about its axis
- The following diagram shows the Earth spinning on its axis



What would happen if the Earth spun on its axis faster than it does now?

- Earth would be hotter
  - A day would be shorter than 24 hrs
  - A year would be longer than 365 days
  - There would be more than four seasons
- The diagram below shows the planet Earth and Sun rays. Labels W, X, Y and Z are different locations on Earth.



According to the diagram, which point on Earth would have the greatest number of daylight hours?

- W
  - X
  - Y
  - Z
- Maya loves to watch the sunrise and sunset. Which of the following explains why the Sun appears to rise and set to an observer on Earth?
    - Sun's rotation
    - Earth's rotation
    - Sun's revolution
    - Earth's revolution
  - When we say something is in orbit, we mean that it is travelling around another object in space. Which of the following does Earth orbit?
    - Sun
    - Moon
    - Mars
    - Venus
  - We know that each year has four seasons: winter, spring, summer, and fall. Why do we have seasons?
    - The tilt of the Earth's axis
    - The shape of the Earth's revolution
    - The shape of the earth's orbit
    - The rotation of the Earth about its axis
  - When it is winter in the Northern Hemisphere, it is summer in the Southern Hemisphere. Why do the Northern and Southern Hemispheres never experience the same season at the same time?
    - Earth is simply balancing out its temperatures so that no part of the planet gets too hot.
    - When it is summer in the Northern Hemisphere, the North Pole is closer to the sun.
    - When it is summer in the Northern Hemisphere, the North Pole is closer to the moon. When it is summer in the Southern Hemisphere, the South Pole is closer to the moon.
    - When it is summer in the Northern Hemisphere, the Northern Hemisphere is receiving more direct rays from the Sun. When it is summer in the Southern Hemisphere, the Southern Hemisphere is receiving more direct rays from the Sun.
  - Earth's movement around the Sun happens at a very constant rate. What would happen if Earth took longer to travel around the Sun than it does now?
    - Earth would be hotter
    - The seasons would be shorter
    - A day would be shorter than 24 hours
    - A year would be longer than 365 days





**KINGDOMS, KINGS AND AN EARLY REPUBLIC**

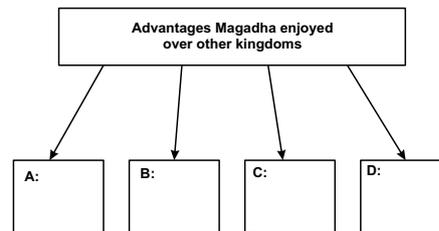
Tick (✓) the correct answer

- By 600 BC, there were \_\_\_\_\_ mahajanapadas.
  - 16
  - 12
  - 13
  - 15
- The capital of the republic of Vajji was \_\_\_\_\_
  - Champa
  - Bodhgaya
  - Vaishali
  - Rajagriha
- Out of the 16 Mahajanapadas, which was the most powerful?
  - Champa
  - Bharuch
  - Magadha
  - Rajagriha
- Which of the following features of tribal rajas made them different from the rajas of the Kingdoms?
  - No army
  - No palaces
  - Both a and b
  - Pompous titles
- What became a major form of power?
  - Coins
  - Buildings
  - Cattle
  - Territory
- The rajas performed which of the following yajnas to strengthen their position?
  - Rajsuya Yajna
  - Ashwamedha Yajna
  - Rajeshwara Yajna
  - Bandarka Yajna
- The word Janapada means
  - People's belongings
  - Land where people settled down
  - People's territory
  - People's power
- Which of the following is not a prominent monarchy of Mahajanapadas?
  - Kosala
  - Maurya
  - Vatsa
  - Magadha

- Which of the following is not a characteristic of a Mahajanapadas?
  - Capital city
  - Construction of wall around the periphery
  - Peaceful life
  - Walls made of wood, stone or bricks.
- Which of the following was not a tax collected by the rajas of those times?
  - Taxes on crops
  - Taxes on hunters and gatherers
  - Taxes on trade
  - Service tax

State whether the following statements are true or false:

- Monarchy is rule by ministers.
- The Buddha belonged to the Lichchavi clan.
- Magadha became very powerful due to large deposits of iron ore.
- We have literary and archaeological sources for the study of the Mahajanapadas.
- The religion of the Later Aryans was Jainism.
- Ajatshatru and Bindusara were the powerful rulers of Magadha.
- Fill in the boxes given below with the advantages that Magadha had over other kingdoms:



ANSWER KEY - CLASS VIII: HISTORY		ANSWER KEY - CLASS VIII: GEOGRAPHY	
The Changing World of Visual Arts	1. c	Industry	1. c
	2. a		2. d
	3. a		3. b
	4. a		4. d
	5. c		5. a
	6. d		6. c
	7. d		7. b
	8. b		8. d
	9. a		9. c
	10. d		10. b
	11. c		11. a
	12. c		12. c
	13. b		13. d
	14. b		14. b
	15. T		15. c
	16. T		16. a
	17. T		17. d
	18. Any Three a) Landscape b) Portrait c) Historical Paintings d) Picturesque Painting		18. b
The National Movement: 1885-1919	1. b	Human Resources	1. b
	2. c		2. c
	3. d		3. d
	4. b		4. a
	5. a		5. c
	6. d		6. b
	7. c		7. d
	8. a		8. b
	9. b		9. c
	10. b		10. d
	11. 1917		11. a
	12. Bombay, 1985		12. c
	13. 1905		13. d
	14. Surat, Lucknow		14. b
	15. 1919		15. c
	16. Any Three a) Elected representatives in the provincial and central legislative councils b) Recruit Indians for high government posts and holding the Indian Civil Service examinations in India c) Reduction of military expenditure d) Changes in government's economic policies to encourage growth of Indian industries e) Promoting the spread of education f) Amendment of the Arms Act		16. a
			17. d
			18. b
	19. c		
	20. d		

ANSWER KEY - CLASS X: MATHEMATICS			
Circles	1. a	Constructions	1. d
	2. b		2. b
	3. d		2. c
	4. c		3. d
	5. a		4. a
	6. d		5. c
	7. b		6. a
	8. d		7. d
	9. c		8. b
	10. c		9. c
	11. b		10. c
	12. d		11. d
	13. Null		12. e
	14. 1		13. f
	15. 2		14. b
	16. Tangent		15. 90°
	17. Point of Contact		16. 16:25
	18. Equal		17. 150°
	19. Perpendicular		18. Area of Minor Segment
	20. Infinite		19. $\frac{\pi}{8}$ cm
	20. 7 cm		
Areas Related to Circles	1. b	Surface Areas and Volumes	1. b
	2. a		2. a
	3. d		3. d
	4. a		4. c
	5. b		5. d
	6. c		6. a
	7. d		7. c
	8. c		8. b
	9. b		9. b
	10. c		10. c
	11. d		11. b
	12. e		12. b
13. f	13. d		
14. b	14. c		
15. 90°	15. f		
16. 16:25	16. e		
17. 150°	17. h		
18. Area of Minor Segment	18. c		
19. $\frac{\pi}{8}$ cm	19. a		
20. 7 cm	20. d		

**ALGEBRAIC EXPRESSIONS**

Tick (✓) the correct answer

1. Which of the following is not a polynomial?

- a.  $5x^2 - \frac{x^2}{3}$                       c.  $\frac{8a^3 - 3a^2}{5}$   
 b.  $x^3 + 4x^2 - 2x$                 d.  $\frac{9x - 2}{5x^2}$

2. What is the degree of the polynomial

- $5x^3 - 8x + 3x^5 + 4x^2 - 7x^4 + 1$ ?  
 a. 3                                      c. 5  
 b. 1                                      d. 0

3.  $2x^2 + 7x^3 - 4x$  is a

- a. Monomial                          c. Trinomial  
 b. Binomial                            d. None

4. The sum of  $9a^2 + 5a - 2$  and  $2a^2 - 4a + 6$  is

- a.  $11a^2 - a - 4$                     c.  $7a^2 + a - 4$   
 b.  $11a^2 + 9a + 8$                   d.  $11a^2 + a + 4$

5. The value of expression  $[3(2x - 5) + 2(x^2 - 3x) + 10]$  for  $x = -1$  is

- a. -3                                      c. -15  
 b. 3                                        d. 11

6. The algebraic expression, when twice the sum of the numbers  $x$  and  $y$  is subtracted from their product is:

- a.  $xy - (x + y)$                       c.  $2(x + y) - xy$   
 b.  $xy - 2(x + y)$                     d.  $xy(x + y)$

7. From the sum of  $2(5x^2 - 2x + 3)$  and  $-7x^2 + x + 3$ , subtract  $3(2x^2 - 7x - 4)$

- a.  $3x^2 - 3x + 9$                       c.  $-3(x^2 + 6x + 7)$   
 b.  $3(x^2 + 6x + 7)$                     d.  $x^2 - 10x - 6$

8. What should be subtracted from  $4a + 3b - 2$  to get  $-6a + 2b - 4$ ?

- a.  $10a + b + 2$                       c.  $-10a - b - 2$   
 b.  $-2a + 5b - 6$                     d.  $2a - 5b + 6$

9. If  $x = 1$  and  $y = -1$ , then the value of  $2x^2y^2 - 2xy - 3x - 4y + 8$  is:

- a. -13                                    c. 9  
 b. 13                                      d. 1

10. The perimeter of a square of side  $2x$  m is

- a.  $4x$                                       c.  $x$   
 b.  $4x^2$                                     d.  $8x$

Fill in the blanks.

11. The numbers having a fixed value are called \_\_\_\_\_ and those which do not have fixed value are called \_\_\_\_\_.
12. An expression containing constants and variables is called an \_\_\_\_\_.
13. The degree of the polynomial  $5x^3 - 8x + 3x^5 + 4x^2 - 7x^4 + 1$  is \_\_\_\_\_.
14. An expression with only one term is called a \_\_\_\_\_.
15. An algebraic expression with more than one terms is called a \_\_\_\_\_.

State whether the following statements is True or False.

16. Unlike terms cannot be added or subtracted the way like terms are added or subtracted.
17. Terms which have different algebraic factors are like terms.
18. A binomial is an algebraic expression with two variables.
19. The degree of constant term is 0.
20.  $\frac{1}{x^2} + 2x - 1$  is a polynomial.

**SIMPLE EQUATIONS**

Tick (✓) the correct answer

- How many sides does an equation have?
  - 0
  - 1
  - 2
  - 3
- If two-third of three-fifths of a number is 80, the number is
  - 120
  - 200
  - 240
  - 300
- $2x - 3 = 4$  is a/an
  - simple equation
  - algebraic expression
  - polynomial
  - all of these
- The value of a for which the expression  $5a + 9$  and  $2a - 3$  become equal is
  - $a = -2$
  - $a = 2$
  - $a = -4$
  - $a = 4$
- The sum of two consecutive natural numbers is 411. The two numbers are
  - 205, 206
  - 204, 205
  - 206, 207
  - None
- After 15 years, Monica's age will be twice her present age. Her present age is.
  - 10 yrs
  - 12 yrs
  - 14 yrs
  - 15 yrs
- Which of the following is the solution to the equation  $8x + 5x - 3x = 17 - 9 + 22$  ?
  - 2
  - 2
  - 3
  - 3
- Which of the following is the solution to the equation  $5x - 3x - 7(x - 5) = 6 - 3(x - 9)$  ?
  - 2
  - 1
  - 2
  - 1
- Which of the following is the solution to the equation  $\left(\frac{4x}{5}\right) - \left(\frac{7}{4}\right) = \left(\frac{x}{5}\right) + \left(\frac{x}{4}\right)$  ?
  - 3
  - 5
  - 5
  - 2

- Grandfathers' present age is 4 times Ali's present age. Ten years ago his age was 7 times Ali's age. Their present age are
  - Ali – 13 years; Grandfather – 52 years
  - Ali – 18 years; Grandfather – 72 years
  - Ali – 15 years; Grandfather – 60 years
  - Ali – 20 years; Grandfather – 80 years

Fill in the blanks.

- An \_\_\_\_\_ is a mathematical statement that two expressions are equal in value.
- A \_\_\_\_\_ of an equation is a value of a variable that makes the equation true.
- We can multiply or divide both side of an equation by \_\_\_\_\_.
- While transposing a number, we change its \_\_\_\_\_.

State whether the following sentences are True or False.

- The process of finding the value of an algebraic expression by replacing the variables, by their particular values is called transposition.
- Same number can be added or subtracted to both sides of an equation.
- $a - 5 = b + 3$  can also written as  $a - b = 3 + 5$ .

Set up an equation for the following cases:

- Sum of two numbers is 90. The greater number 25 more than twice the smaller (take smaller number as x). \_\_\_\_\_
- Chinki's father is 40 years old. He is 4 years older than three times Chinki's age (take Chinki's age as a) \_\_\_\_\_
- The length of a rectangle is 20 cm more than its breadth. Its perimeter is 125 cm. (take breadth as b) \_\_\_\_\_

## EXPONENTS AND POWERS

Tick (✓) the correct answer

- Express  $-343$  in power notation
  - $(-7)^3$
  - $7^3$
  - $-6^3$
  - None
- What is the index and base in the expression  $2^8$ ?
  - index = 4; base = 4
  - index = 2; base = 8
  - index = 8; base = 2
  - None
- $(1^0+2^0+3^0+4^0+5^0+6^0+7^0+8^0+9^0+10^0)$ 
  - 55
  - 10
  - 0
  - 1
- $\left\{ \left( \frac{-2}{5} \right)^5 \times \left( \frac{-2}{5} \right)^{-2} \right\} \div \left( \frac{-2}{5} \right)^3$  is equal to
  - 1
  - 0
  - 1
  - $\left( \frac{-2}{5} \right)^4$
- Express 234.5678 in standard form
  - $2.345 \times 10^4$
  - $2.345 \times 10^2$
  - $2.345 \times 10^{-2}$
  - $2.345 \times 10^{-4}$
- A number to the 7<sup>th</sup> power divided by the same number to the 3<sup>rd</sup> power equals 256. What is the number?
  - 4
  - 3
  - 2
  - 5
- Find x if  $5^{6x} = (625)^3$ 
  - 7
  - 2
  - 2
  - 1
- Simplify  $\frac{3^7 \times 10^7 \times 25}{5^8 \times 6^6}$ 
  - 1
  - 0
  - 30
  - 10
- Express the following with a single exponent

$$\left( \left( -\frac{1}{3} \right)^2 \right)^3 \times \left( \left( -\frac{1}{3} \right)^{-4} \right)^5$$

- $(-3)^{14}$
- $\left( -\frac{1}{3} \right)^2$
- $3^{14}$
- $\left( \left( -\frac{1}{3} \right)^2 \right)^3 \times \left( \left( -\frac{1}{3} \right)^4 \right)^5$

- Express 0.00009823 in standard form
  - $9.823 \times 10^5$
  - $98.23 \times 10^-$
  - $98.23 \times 10^4$
  - $9.823 \times 10^{-5}$

Fill in the blanks.

- If base is any number with power zero then the value of exponent is \_\_\_\_\_.
- An expression of the type  $x^m$  is a/an \_\_\_\_\_ for x multiplied m times.
- The number which is multiplied by itself again and again is the \_\_\_\_\_.
- On dividing exponents with the same base, powers are \_\_\_\_\_.

State whether the following sentences are True or False.

- On multiplying exponents with the same base, powers are subtracted.
- If we multiply exponents with same powers, then bases are multiplied but powers remain same.
- A negative rational number raised to even power is positive.

Match the following numbers with their exponential notation

- |          |             |
|----------|-------------|
| 18. 128  | A. $(3)^7$  |
| 19. 1296 | B. $(2)^7$  |
| 20. 2187 | C. $(-6)^4$ |

**RATIO AND PROPORTION**

Tick (✓) the correct answer

1. The ratio of two numbers is 3:5 and their sum is 40. The larger of two numbers is
 

a. 15	c. 25
b. 20	d. 40
  
2. Which ratio is different from the others?
 

a. 4:3	c. $\frac{3}{4}$
b. 3 to 4	d. 3:4
  
3. If a:b = 3:7, find the value of (5a + b) : (4a + 5b)
 

a. 15:44	c. 15:49
b. 22:35	d. 22:47
  
4. A certain amount was divided between A and B in the ratio 4:3. If B's share was Rs. 4800, the total amount was
 

a. Rs. 11,200	c. Rs. 19,200
b. Rs. 6,400	d. Rs. 39,200
  
5. A sum of Rs. 53 is divided among A, B, C in such a way that A gets 7 more than what B gets and B gets Rs. 8 more than what C gets. The ratio of their shares is
 

a. 16:9:18	c. 18:25:10
b. 25:18:10	d. 15:8:30
  
6. In a proportion, the extremes are 11 and 35. If one of the mean is 7, then the other mean is
 

a. 55	c. 11
b. 45	d. 35
  
7. In a school there are 650 students. The ratio of the boys to that of the girls is 9:4. How many more girls should join the school so that the ratio becomes 3:2?
 

a. 25	c. 60
b. 50	d. 100
  
8. There are 56 teachers in a school. Out of them, 42 are lady teachers and the rest are male teachers. The ratio of lady teachers to male teachers is
 

a. 2:1	c. 1:3
b. 1:2	d. 3:1

9. In the word MARATHON the ratio of consonants to vowels is
 

a. 5:3	c. 5:8
b. 3:5	d. 3:8
  
10. The class library has 7 English story books, 11 Hindi story books, 15 art books, 10 encyclopaedias, and 5 health books. What is the ratio of story books to all books in simplest form?
 

a. 7:48	c. 3:8
b. 11:48	d. 3:48

Fill in the blanks.

11. A \_\_\_\_\_ is formed when two quantities are compared by division.
  
12. Product of \_\_\_\_\_ = Product of \_\_\_\_\_ .
  
13. If a, b, c are in continued proportion, then c is called \_\_\_\_\_ proportional to a and b.
  
14. If 1 dozen pens costs Rs. 40, then the cost of 27 pens is \_\_\_\_\_ .
  
15. If a : b :: c : d, then d is called the \_\_\_\_\_ to a, b, c.

State whether the following statements are true or false.

16. A ratio has no unit.
  
17. Any equality of two proportions is called a ratio.
  
18. 2:3 is the simplest form of 12:18.
  
19. The ratio 5:8 is greater than 10:12.
  
20. The numbers 10, 20, 30 and 40 are in proportion.

**THE CHANGING WORLD OF VISUAL ARTS**

Tick (✓) the correct answer

1. From which century onwards did the European artists bring new styles and paintings of convention with them, such as portrait painting to India?
    - a. 16<sup>th</sup> century
    - b. 17<sup>th</sup> century
    - c. 18<sup>th</sup> century
    - d. 19<sup>th</sup> century
  2. In the second half of the 19th century which type of art movement was rejected by the painters in favour of realism?
    - a. Romanticism
    - b. Picturesque
    - c. Surrealism
    - d. Impressionism
  3. The famous European painter Honore Daumier belongs to which category of painting?
    - a. Realism
    - b. Picturesque
    - c. Surrealism
    - d. Impressionism
  4. Which of the following were famous painters who used to create aquatints?
    - a. Thomas Daniell and William Daniell
    - b. Thomas Daniels and Willis Daniell
    - c. Thompson Denning and Warren Dennell
    - d. Thoman Dennell and William Denning
  5. Which of the following was not a feature of the paintings by the artists who created aquatints?
    - a. British rule bringing modern civilisation to India
    - b. Traditional life of India as pre-modern and static
    - c. The Majestic life of Indian rulers
    - d. Majestic European-style buildings and new modes of transport
  6. Which of the following is not a part of portrait painting?
    - a. An ideal means to display lavish lifestyles
    - b. An ideal means to display lavish wealth
    - c. An ideal means to display status
    - d. An ideal means to display their costumes
  7. Who among the following represented the fusion of traditional and European painting?
    - a. Jamini Roy
    - b. Abindranath Tagore
    - c. Nandlal
    - d. Raja Ravi Varma
  8. Which of the following Indian rulers encouraged mural paintings as an act of protest against the British?
    - a. Siraj-ud-daullah
    - b. Tipu Sultan
    - c. Mir Qasim
    - d. Mir Jafar
  9. Which of the following terms describe paintings that depict scenes from British imperial history?
    - a. Historical paintings
    - b. Picturesque paintings
    - c. Portraits
    - d. Murals
  10. Which of the following art forms and techniques was not introduced to India by British artists?
    - a. Oil painting
    - b. Historical painting
    - c. Life-size portrait painting
    - d. Murals
  11. Paintings which showed the lavish lifestyles, wealth and status of Europeans in India belonged to the category of which of the following paintings?
    - a. History paintings
    - b. Picturesque paintings
    - c. Portrait paintings
    - d. Mural paintings
  12. Who among the following was one of the most famous visiting European painters specialising in portrait painting?
    - a. Thomas Daniell
    - b. William Daniell
    - c. Johann Zoffany
    - d. Tilly Kettle
  13. The Storming of Seringapatnam was painted by Telly Kettle and showed the defeat of
    - a. Hyder Baig
    - b. Tipu Sultan
    - c. Siraj-ud-daullah
    - d. Mir Qasim
  14. The famous scroll paintings that had mythological themes were associated with
    - a. Kalikatta
    - b. Kalighat
    - c. Kalital
    - d. Kalika
- State whether the following statements are true or false:**
15. In the 19<sup>th</sup> century, Calcutta Art Studio produced lifelike images of eminent Bengali personalities, as well as mythological pictures
  16. Mir Qasim and Mir Jafar encouraged their painters to use shades and light in their paintings
  17. The portrait paintings of the Europeans were often used to display power, wealth and position.
  18. Mention any three types of painting styles of the European painters.
    - a. \_\_\_\_\_
    - b. \_\_\_\_\_
    - c. \_\_\_\_\_



## INDUSTRY

Tick (✓) the correct answer

- Which industries depend on the raw materials they use?**
  - Marine based industries
  - Forest based industries
  - Agro-based industries
  - Mineral-based industries
- Where are most industrial regions of the world located?**
  - Tropical regions, near iron and steel industries
  - Tropical regions, electricity and power sources
  - Polar regions, power sources and non- mineral, and electricity mines
  - Temperate regions, near sea-ports and near coal-fields
- Which of these are 'Emerging industries'?**
  - Iron and Steel Industry
  - Information Technology, Wellness, Hospitality and Knowledge
  - Textile Industry
  - Cottage Industries
- Why are all sectors of industry dependent on the Iron and Steel industry?**
  - Provide raw materials
  - Needed for transportation of goods
  - Availability of machinery
  - Basic infrastructure
- After 1950s which of these is considered to be an ideal location for Iron and Steel industries?**
  - Flat land near sea ports
  - Mountain regions
  - Plateau regions
  - Deserts
- What factors are necessary for the emergence of Industrial regions?**
  - Large number of industries
  - Availability of raw materials
  - Location of industries close to each other and sharing benefits
  - Availability of transport and communication
- Which type of factors have been responsible for the development of Pittsburgh and Ahmedabad?**
  - Situational factors
  - Locational factors
  - Emotional factors
  - Ownership
- What makes 'Sakchi' the chosen site for a steel plant?**
  - Raw materials
  - Market
  - Transport
  - Market, raw material, transport and water supply
- What comprises the 'Outputs' of an industrial system?**
  - Raw materials
  - Capital
  - End product and the income earned
  - Income earned
- What factors helped 'Osaka' to develop as the 'Manchester of Japan'?**
  - Labour
  - Topography, labour, transport, climate, port facilities
  - Transport facilities
  - Capital
- Why are high technology industries usually located close together?**
  - Easy accessibility, exchange of knowledge and efficient facilities
  - Labour
  - Availability of talent
  - Know-how
- What are the locational advantages of 'Silicon Valley'?**
  - Climate
  - Skilled work force
  - Transport, markets, skilled work force, climate, close to scientific and technological centres
  - Transport
- Which human resource factor has contributed specially to the development of the 'Silicon Plateau'?**
  - Large population
  - Large number of Emigrants
  - Immigration
  - Large work force of skilled managers with experience
- What criteria are essential for the establishment of IT industries?**
  - Capital
  - Availability of resources, cost and infrastructure
  - Labour
  - Transport
- The town X is located near a leading iron and steel industry, its transportation facilities are located on the banks of a river. The people living in the town are skilled craftsmen in metal products. Which industry has the potential to develop in town X?**
  - Small Scale industry
  - Rubber products
  - Cycles, utensils, brassware or any metallurgical industry
  - Sports goods
- The town Y rears cattle, sheep and goats. What kind of industries is this town likely to support?**
  - Pastoral (Leather, dairy farming and woollen textiles)
  - Agro-based industries
  - Forest based industries
  - Mineral based industries
- A large-scale industry needs to be set up in town 'Y'. What are the essential criteria needed for the establishment of such an industry?**
  - Large Capital
  - Heavy machinery
  - Large workforce
  - Large machines, large workforce, capital, developed market and good transportation facilities
- What are the advantages of 'Cooperatives'?**
  - Can produce goods in large numbers
  - Goods can be distributed for the common benefit, producers are involved in all aspects of industry and protect the producers from economic vulnerability
  - Provide employment to local people
  - Owned by individuals
- Where are the production sites of 'Multinational industries' most likely to be set up?**
  - Places where they can sell their products
  - Places from where they can control business
  - Sites where labour is cheap and availability of a pool of skilled labour
  - Where raw materials are available
- In a Joint Sector industry how do both the partners stand to benefit?**
  - Raw materials
  - Capital
  - Pooling of resources, investments and profits
  - Capital

## HUMAN RESOURCES

Tick (✓) the correct answer

- What factors are used by scientists to predict population sizes?**

  - Population density
  - Age structure, survivorship, fertility rates and migration
  - Age structure
  - Population growth rate
- Which factors determine the density of a population ?**

  - Climate
  - Topography
  - Topography, climate, nearness to water bodies and other social, cultural and economic factors
  - Water bodies
- What factor determines future population growth trends?**

  - Growth rate
  - Death rate
  - Birth rate
  - Age structure of a population
- What kind of a population pyramid is there for 'Developing Countries'?**

  - Broad at the base and narrow at the top
  - Narrow at the base
  - Narrow at the base and broad at the top
  - Broad at the base and broad at the top
- Why has there been an increase in the population of the world?**

  - Increase in Birth Rate
  - Decrease in Death Rate
  - Increase in the natural growth rate
  - No change
- What effect are low Birth rates and low Death rates having on the population of developed countries?**

  - Fast population growth
  - Slow population growth
  - No growth in population
  - Marginal growth in population
- What tool is used by demographers to study the composition of a population in a country?**

  - Bar graph
  - Diagram
  - Map
  - Population Pyramid
- What refers to the average number of people who live within the boundaries of a specific amount of land, such as a square mile?**

  - Birth Rate
  - Population Density
  - Death Rate
  - Growth Rate
- Which part of the population pyramid shows the number of children and births?**

  - Middle
  - Top
  - Bottom
  - Centre
- Which of these will be considered 'dependants' in a country?**

  - Young dependants
  - Old people
  - Elderly dependants
  - Young dependants and elderly dependants
- Which part of the population pyramid shows the elderly and the number of deaths?**

  - Top
  - Middle
  - Bottom
  - Between the top and the middle
- Which of these countries has experienced a loss in numbers due to 'Emigration'?**

  - Ghana
  - Egypt
  - Sudan
  - Nigeria
- Which of these is responsible for change in population sizes?**

  - Emigration
  - Emigrants
  - Immigration
  - Migration
- Which of these is a country whose population has increased due to Immigration?**

  - India
  - Australia
  - Kenya
  - Japan
- Which of these factors determines the migration of people?**

  - Employment
  - Better health facilities
  - Employment, education and health facilities
  - Educational opportunities
- What are the natural causes of 'Population Change'?**

  - Births and Deaths
  - Deaths
  - Births
  - Migration
- Which of these is likely to have a high GDP?**

  - A country which has a large number of dependents
  - A country having a large working population
  - A country with no dependents
  - Country having no working population
- The population pyramid of India shows that India has a large number of young people, what does this imply?**

  - Large number of dependants
  - Large number of children
  - Large number of old people
  - Strong and expanding labour force
- If the Death Rates of a country are decreasing, this means that**

  - The elderly live longer
  - More adults will reach old age
  - More infants will survive to become adults
  - Infants will reach the age of 15 years
- Why does the population of a country determine the future of any nation?**

  - Population size changes
  - Population decrease
  - Population increase
  - People are a resource

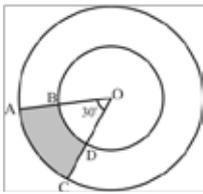




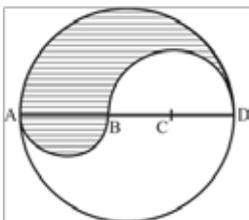
**AREAS RELATED TO CIRCLES**

Tick (✓) the correct answer

- The area of a circle is numerically equal to its perimeter. The diameter of the circle is
  - 1 unit
  - 2 units
  - 3 units
  - 4 units
- A toy bicycle wheel requires 100 revolutions to move a distance of 22 m. The radius of the wheel is  $\left(\pi = \frac{22}{7}\right)$ 
  - 7 cm
  - 3.5 cm
  - 10 cm
  - 22 cm
- In the following figure, two concentric circles are given. If  $OB = 1$  cm and  $OA = 2$  cm, the area of the shaded region is

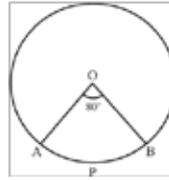


- $\pi$  cm<sup>2</sup>
  - $2\pi$  cm<sup>2</sup>
  - $\frac{\pi}{2}$  cm<sup>2</sup>
  - $\frac{\pi}{4}$  cm<sup>2</sup>
- The area of a sector of radius 3 cm is  $\frac{5}{2}\pi$  cm<sup>2</sup>. The angle of the sector is
    - 100°
    - 90°
    - 60°
    - 45°
  - The perimeter of a sector of radius 5.9 cm is 19.4 cm. The length of its arc is
    - 11.8 cm
    - 7.6 cm
    - 5.9 cm
    - 7.8 cm
  - In the following figure, ABCD is the diameter of the circle such that  $AB = BC = CD = a$  cm. Three semi-circles are drawn with AB, BC and CD as diameters respectively. The perimeter of the shaded region is



- $2\pi a$  cm
  - $3\pi a$  cm
  - $2\pi a$  cm
  - $3\pi a$  cm
- ABCD is a square of side 4 cm, inscribed in a circle. The radius of the circle is
    - 16 cm
    - 8 cm
    - $4\sqrt{2}$  cm
    - $2\sqrt{2}$  cm
  - In the figure given in Q. 7, the area of the shaded region is  $(\pi = 3.14)$ 
    - 8.12 cm<sup>2</sup>
    - 25.12 cm<sup>2</sup>
    - 9.12 cm<sup>2</sup>
    - 16 cm<sup>2</sup>

- In the following figure, sector OAPB is cut off from the circle of radius  $1\frac{1}{2}$  cm. The area of the remaining part of the circle is  $\left(\pi = \frac{22}{7}\right)$



- $\frac{11}{2}$  cm<sup>2</sup>
  - $\frac{11}{7}$  cm<sup>2</sup>
  - $11\frac{1}{2}$  cm<sup>2</sup>
  - None of these
- Four cows are tethered at the four corners of a square plot of side 100 m, so that they can just reach one another. The area grazed by the four cows is
    - 10,000 m<sup>2</sup>
    - $625\pi$  m<sup>2</sup>
    - $2500\pi$  m<sup>2</sup>
    - $7500\pi$  m<sup>2</sup>

Match the following:

Column A	Column B
11. Perimeter of a sector of a circle	a. $\frac{\pi r \theta}{180}$
12. Area of a semi-circle	b. $\frac{\pi r^2}{4}$
13. Area of a sector of a circle	c. $\pi r$
14. Area of a quadrant of a circle	d. $\frac{\pi r \theta}{180} + 2r$
	e. $\frac{\pi r^2}{2}$
	f. $\frac{\pi r^2 \theta}{360}$

Fill in the blanks with the correct option.

- The degree measure of the angle at the centre of a quadrant is .....  $(45^\circ / 90^\circ)$
- The ratio of the circumferences of two circles is 4 : 5. The ratio of their areas is .....  $(4 : 5 / 16 : 25)$
- The angle through which the minute hand moves from 7 : 30 a.m. to 7 : 55 a.m. is .....  $(150^\circ / 100^\circ)$
- Area of the major segment of a circle = Area of circle - .....  $(\text{Area of sector} / \text{Area of minor segment})$
- The length of the arc of a sector of angle  $45^\circ$  and radius 1 cm = .....  $\left(\frac{\pi}{8} \text{ cm} / \frac{\pi}{4} \text{ cm}\right)$
- Using  $\pi = \frac{22}{7}$ , if the perimeter of a semi-circular protractor is 18 cm, then its diameter is .....  $(7 \text{ cm} / \frac{7}{2} \text{ cm})$

**SURFACE AREAS AND VOLUMES**

Tick (✓) the correct answer

- A round bottom flask is a combination of
  - Hemisphere + cylinder
  - Sphere + cylinder
  - Hemisphere + cone
  - Sphere + cone
- When a solid is melted and recast to form another solid, the volume of the new solid
  - Remains unchanged
  - Increases
  - Decreases
  - May increase or decrease
- A solid sphere of radius  $r$  is melted to form a cone of the same radius. The height of the cone is
  - $r$
  - $2r$
  - $3r$
  - $4r$
- A cube of edge 2 cm is melted to form smaller cubes of edge 1 cm each. The ratio of the surface area of the large cube to the smaller cubes is
  - 1 : 8
  - 1 : 4
  - 1 : 2
  - None of these
- A toy is in the form of a cone mounted on a hemisphere of common base radius 7 cm. The total height of the toy is 31 cm. The slant height of the cone is
  - 31 cm
  - 7 cm
  - 24 cm
  - 25 cm
- The radii of two cylinders are in the ratio 1 : 2 and their heights are in the ratio 5 : 3. The ratio of their volumes is
  - 5 : 12
  - 25 : 36
  - 5 : 6
  - 4 : 9
- A solid spherical ball of diameter 6 cm is melted to form three smaller spherical balls. If the diameter of two of the balls is 4 cm and 5 cm, the diameter of the third ball is
  - 1.5 cm
  - 2 cm
  - 3 cm
  - 4.5 cm
- Three cubes, each of volume 8 cm<sup>3</sup> are joined end to end. The surface area of the resulting cuboid is
  - 28 cm<sup>2</sup>
  - 56 cm<sup>2</sup>
  - 72 cm<sup>2</sup>
  - None of these
- The curved surface area of a cylinder is one-third of its total surface area. If its total surface area is 462 sq. cm and the height is twice the radius, then the height of the cylinder is  $\left(\pi = \frac{22}{7}\right)$ 
  - $\frac{7}{2}$  cm
  - 7 cm
  - 154 cm
  - 14 cm

- A solid metallic sphere of radius 21 cm is melted to form a number of smaller cones of diameter 14 cm and height 6 cm. The number of cones formed is
  - 63
  - 189
  - 126
  - 100
- A test tube is in the shape of a right circular cylinder with a hemispherical end. The diameter of both the parts is 3 cm and the total height of the test tube is 9.5 cm. The volume of liquid that it can hold is
  - $81\pi$  cm<sup>3</sup>
  - $\frac{81}{4}\pi$  cm<sup>3</sup>
  - $18\pi$  cm<sup>3</sup>
  - $\frac{9}{4}\pi$  cm<sup>3</sup>
- A hemispherical bowl of diameter 30 cm is filled with some liquid, which is poured into 60 cylindrical bottles of height 6 cm each. The diameter of each cylindrical bottle is
  - 2.5 cm
  - 5 cm
  - 3 cm
  - 6 cm
- The height of a frustum of a cone is 24 cm and its slant height is 40 cm. The difference in the radii of the two circular sides is
  - 28 cm
  - 21 cm
  - 25 cm
  - 32 cm
- A bucket is in the form of a frustum of a cone. The radii of its two ends are 14 cm and 7 cm. If the slant height of the bucket is 20 cm, its total surface area is
  - $420\pi$  cm<sup>2</sup>
  - 420 cm<sup>2</sup>
  - $469\pi$  cm<sup>2</sup>
  - $616\pi$  cm<sup>2</sup>

Match the following:

Column A	Column B
15. Total surface area of a cylinder	a. $4\pi r^2$
16. Total surface area of a cone	b. $\frac{4}{3}\pi r^3$
17. Volume of a hemisphere	c. $\frac{1}{3}\pi h(R^2 + r^2 + Rr)$
18. Volume of a frustum	d. $2\pi r^2$
20. Lateral surface area of a hemisphere	e. $\pi r(l + r)$
	f. $2\pi r(h + r)$
	g. $\pi l(R + r)$
	h. $\frac{2}{3}\pi r^3$
	i. $3\pi r^2$



**HELP BOX**

Daddy Fell into the Pond

There was a Naughty Boy

There was a Little Girl

The Dentist and the Crocodile

Caterpillar

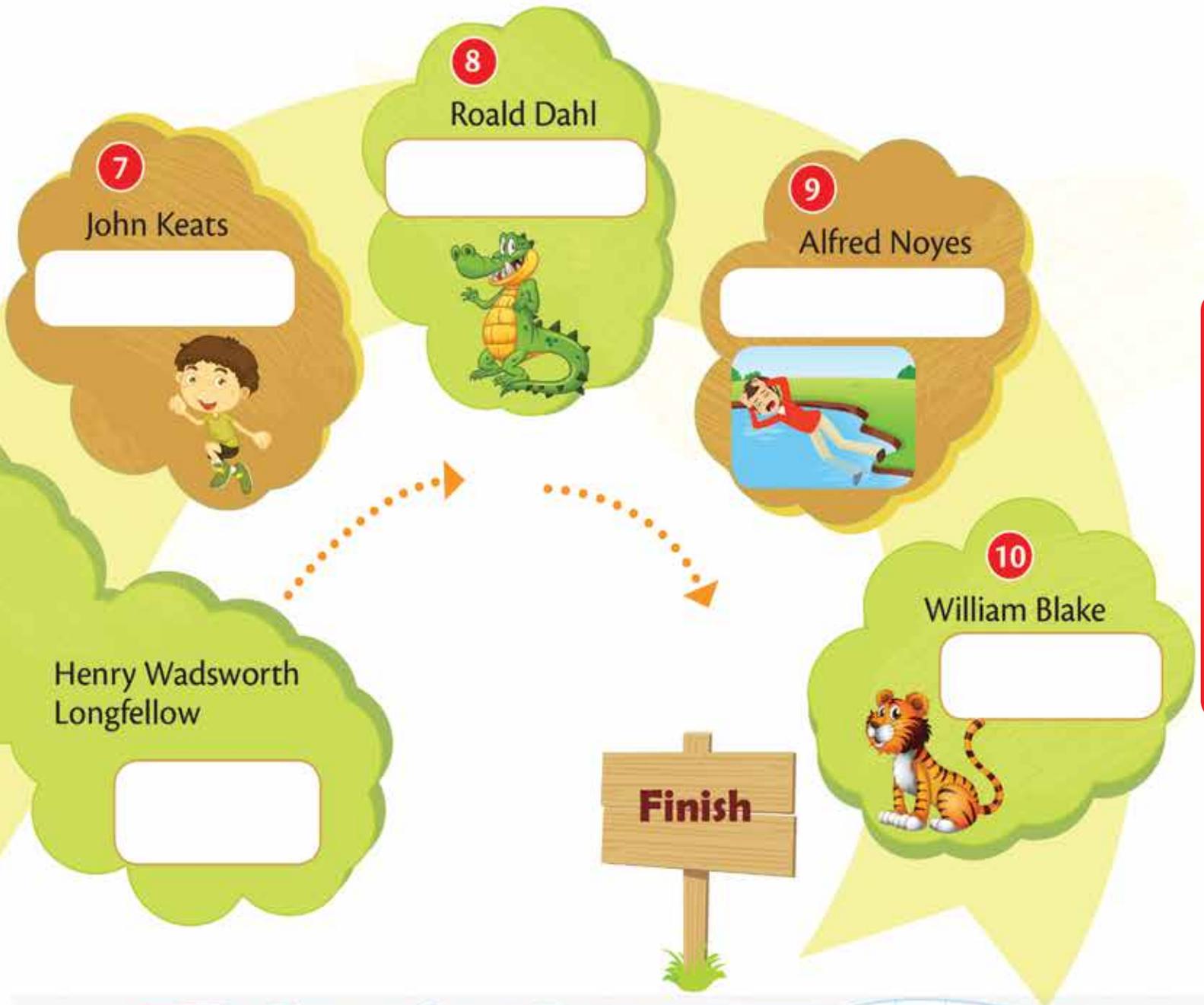
The Tyger

Humpty Dumpty's Song

The First Tooth

At the Seaside

After Apple-Picking



↓ CLASSROOM DISPLAY PULLOUT ↓

**~AROUND ME~**

Which poems do you have in your school books? Learn the names of their poets.

**WORD POOL**

The word 'Tyger' refers to a tiger.

**DIY Project**

Find out the names of any ten popular poems. Learn one and recite it in class.