

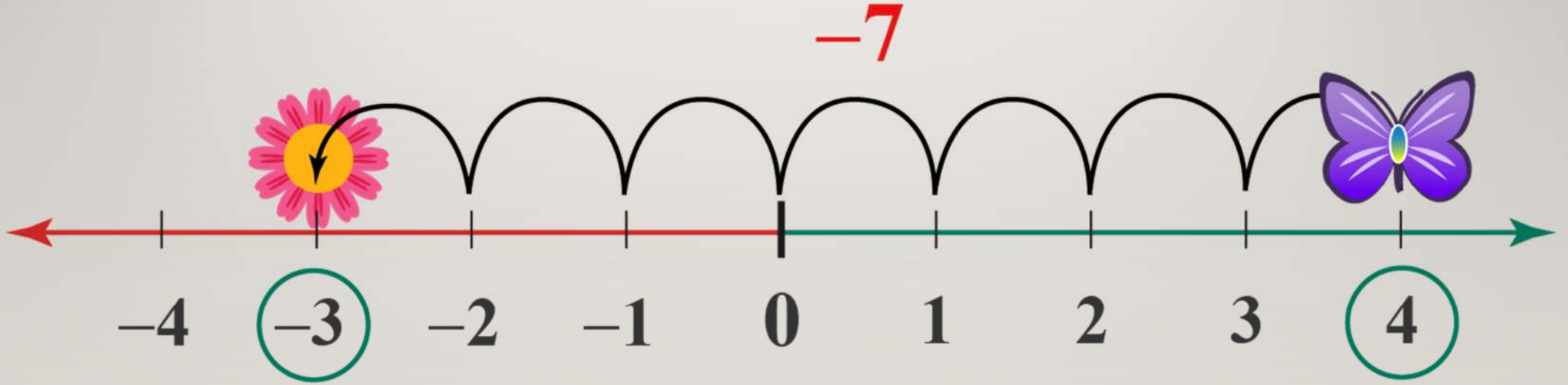
8 ನೇ ತರಗತಿ ಗಣಿತ

- ▶ ಸುಧಾ.ಹೆಚ್.ಆರ್.
- ▶ ಕರ್ನಾಟಕ ಪಬ್ಲಿಕ್ ಶಾಲೆ
- ▶ ಬನ್ನಿ ಕೋಡು
- ▶ ಹರಿಹರ ತಾಲ್ಲೂಕ್
- ▶ ದಾವಣಗೆರೆ ಜಿಲ್ಲೆ

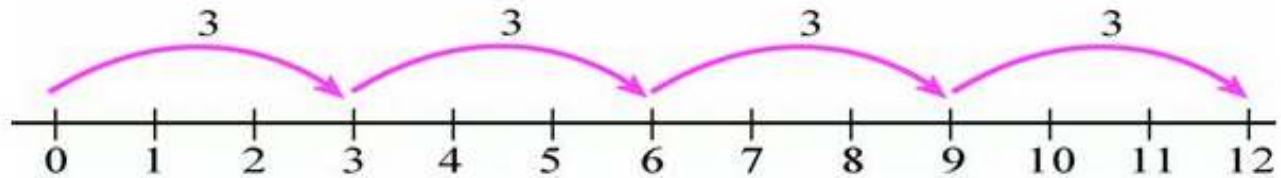
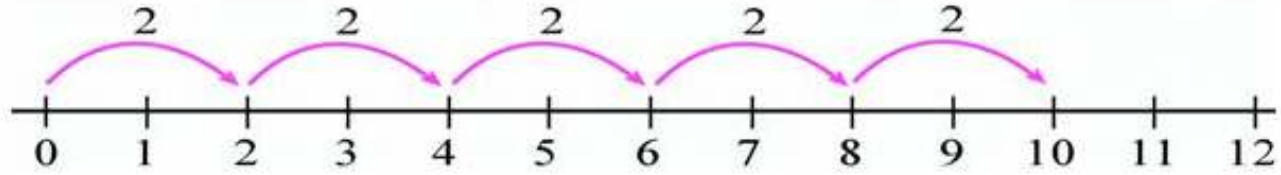
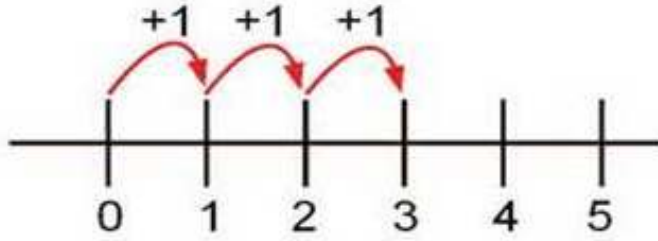
ಬುನಾದಿ ಸಾಮರ್ಥ್ಯಗಳು

- ▶ ಸಂಖ್ಯಾಪದ್ಧತಿಯ ಗಣಗಳು,ಗುಣಲಕ್ಷಣಗಳು
- ▶ ಖಜಾನಾಕ್ರಮಗಳು,ವಿಧ,ಗಣಿತ ಕ್ರಿಯೆಗಳು
- ▶ ರೇಖೆಗಳು ಮತ್ತು ಕೋನಗಳು
- ▶ ತ್ರಿಭುಜದ ಲಕ್ಷಣಗಳು
- ▶ ನಮೂನೆ ಮತ್ತು ಸರ್ವಸಮತೆ
- ▶ ಜ್ಯಾಮಿತೀಯ ರಚನೆಗಳು
- ▶ ಘಾತಾಂಕಗಳು
- ▶ ಸರಳರೇಖೆಯ ಸಮೀಕರಣಗಳು
- ▶ ದತ್ತಾಂಶ ನಿರ್ವಹಣೆ
- ▶ ಸಂಭವನೀಯತೆ
- ▶ ನಮೂನಾಕೃತಿಗಳ ಸುತ್ತಲಿಟ್ಟ ಮತ್ತು ವಿಶ್ಲೇಷಣೆ
- ▶ 3 ಆಯಾಮದ ವಸ್ತುಗಳು

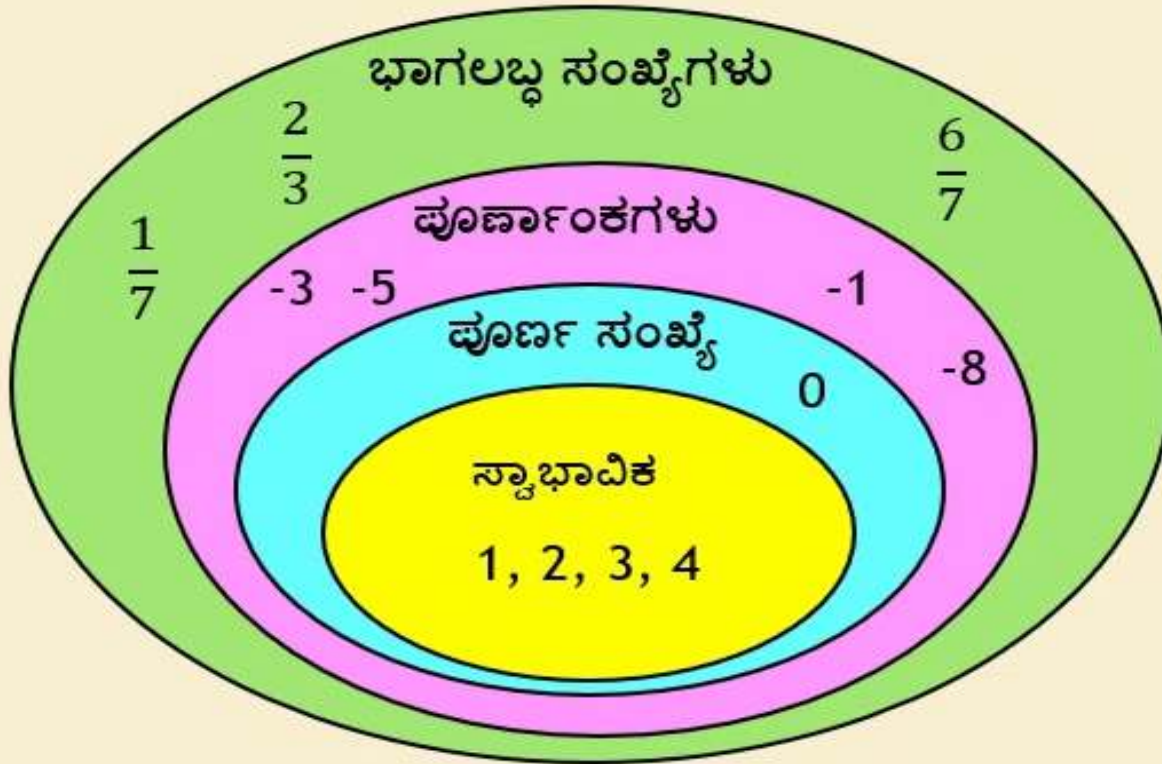
ಸಂಖ್ಯಾರೇಖೆಯಿಂದ ಉತ್ತರ ತಿಳಿ



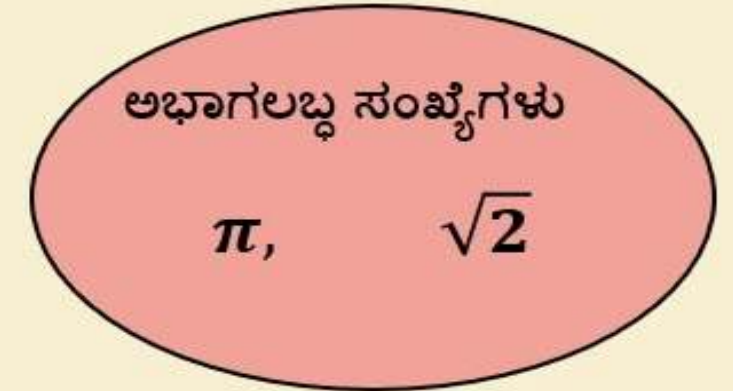
ನೀನು ಮಾಡು



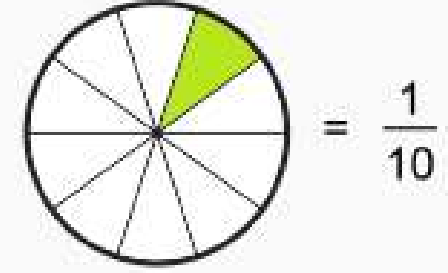
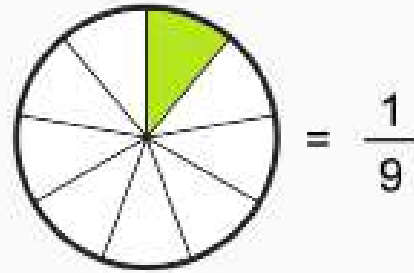
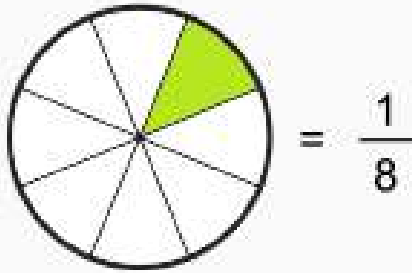
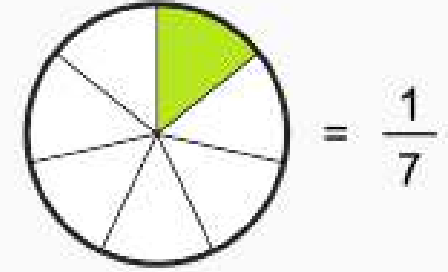
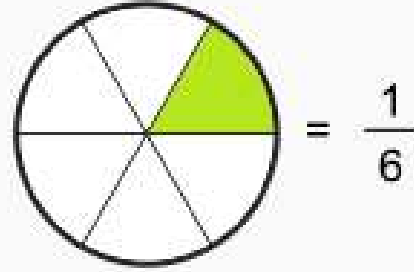
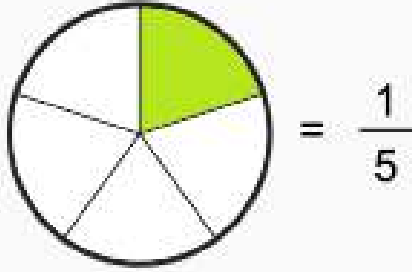
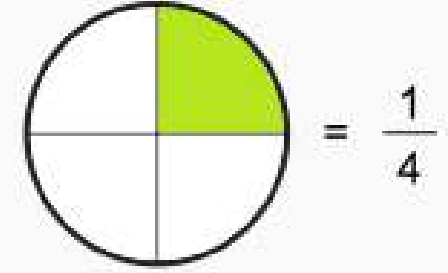
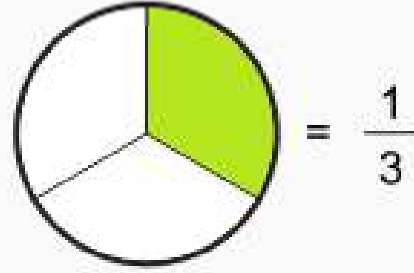
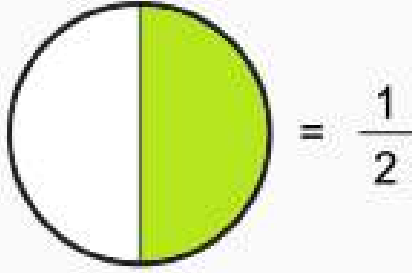
ವಾಸ್ತವ ಸಂಖ್ಯೆಗಳು (Real numbers)



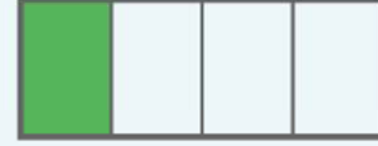
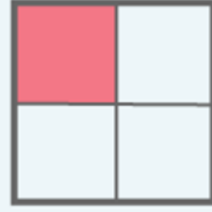
ವಾಸ್ತವ ಸಂಖ್ಯೆಗಳು



ಭಿನ್ನರಾಶಿ ತಿಳಿ



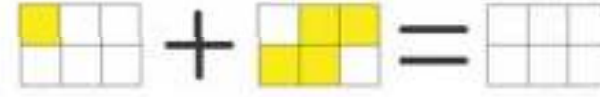
ಚಿತ್ರ ನೋಡಿ ಭಿನ್ನರಾಶಿ ಬರೆ



ಮೊತ್ತ ಮಾಡು



$$\frac{2}{8} + \frac{3}{8} = \frac{\square}{\square}$$



$$\frac{1}{6} + \frac{4}{6} = \frac{\square}{\square}$$



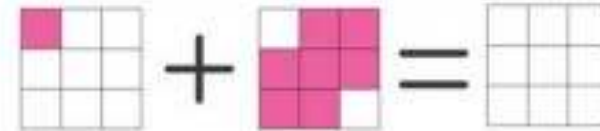
$$\frac{2}{5} + \frac{2}{5} = \frac{\square}{\square}$$



$$\frac{3}{7} + \frac{4}{7} = \frac{\square}{\square}$$



$$\frac{1}{4} + \frac{2}{4} = \frac{\square}{\square}$$



$$\frac{1}{9} + \frac{7}{9} = \frac{\square}{\square}$$

ಭಿನ್ನರಾಶಿಯ ಮೇಲಿನ ಕ್ರಿಯೆಗಳು

$$\frac{5}{9} + \frac{1}{9} = \frac{6}{9}$$

$$\frac{6 \div 3}{9 \div 3} = \boxed{\frac{2}{3}}$$

$$9 + \frac{3}{3} - \frac{1}{3}$$
$$= 9 + \frac{3-1}{3}$$
$$= 9 + \frac{2}{3} = \boxed{9\frac{2}{3}}$$

$$\frac{2}{3} \times \frac{7}{8} = \frac{14}{24}$$

$$\frac{14 \div 2}{24 \div 2} = \boxed{\frac{7}{12}}$$

$$2\frac{3}{4} - 1\frac{1}{7} = \frac{45}{28}$$

$$45 \div 28 = 1 \text{ r. } 17$$

$$\frac{45}{28} = \boxed{1\frac{17}{28}}$$

ಹೊಂದಿಸಿ ಬರೆಯಿರಿ

LIST I

(a) Reciprocal of 3

(b) $\frac{1}{6} \times 18$

(c) $\frac{4}{15} \times \frac{3}{16}$

(d) $\frac{1}{3} \div \frac{1}{6}$

(e) $\frac{15}{9} \div \frac{12}{18}$

LIST II

(i) $\frac{1}{20}$

(ii) 3

(iii) $\frac{1}{2}$

(iv) $\frac{5}{2}$

(v) $\frac{1}{3}$

(vi) 2

ବିଢ଼ ତିଢ଼ି

7	$3 + 4y$	$x + y + z$
$13n$	$2a + 3c$	$p^2 + 5p + 4$
$-5z^3$	$6x^2 + 3xy$	$a^2 - 2ab - b^2$
$4ab^3c^2$	$7pqr + pq^2$	$3v^2 - 2w + ab^3$

ಬೀಜೋಕ್ತಿಗಳ ಸಂಕಲನ

$$\begin{aligned}2x^2 + x^2 + 2y + 13 \\ = 3x^2 + 2y + 13\end{aligned}$$

$$(3y^2 + 5y - 6) + (7y^2 - 9)$$

$$3y^2 + 7y^2 + 5y - 6 - 9$$

$$10y^2 + 5y - 15$$

Solution:

$$10y^2 + 5y - 15$$

$$1) (3x^3 - 7x) + (3x^3 + 4x) = 6x^3 - 3x$$

$$2) (2w^2 + w - 5) + (4w^2 + 7w + 1) = 6w^2 + 8w - 4$$

$$3) (2a^3 + 3a^2 + 5a) + (a^3 + 4a + 3) = \\ 3a^3 + 3a^2 + 9a + 3$$

$$3x^2 + 5x - 3$$

$$+ \underline{x^2 - 5x + 1}$$

$$4x^2 + 0x - 2 = 4x^2 - 2 \text{ ANSWER}$$

$$4x^2 + 3x - 9$$

$$+ \underline{-2x^2 + 10}$$

$$2x^2 + 3x + 1 \text{ ANSWER}$$

ಬೀಜೋಕ್ತಿಗಳ ಗುಣಾಕಾರ

EXAMPLE 2

$$(3x-5y)(8x-2y)$$
$$3x(8x-2y) + (-5y)(8x-2y)$$
$$24x^2 - 46xy + 10y^2$$

EXAMPLE 3

$$(7x-9)(3x^2-6x+2)$$
$$7x(3x^2-6x+2)$$

$$3x^2(x+5)$$
$$3x^2(x+5) = 3x^2(x) + 3x^2(5)$$
$$= 3x^2x^1 + 3 \cdot 5x^2$$
$$= 3x^3 + 15x^2$$

$$-5x(4x-2)$$
$$= (-5x) \cdot 4x + (-5x) \cdot (-2)$$
$$= -20x^2 + 10x$$

ಸಜಾತಿ ಮತ್ತು ವಿಜಾತಿ

Like Terms	Unlike Terms
$2x, -5x$	$6x, 5y$
$\frac{1}{2}a, -\frac{1}{2}a$	y, y^2
$-2xy^2, 8xy^2$	$x, 7$

Like terms	Unlike terms
$2x, -7x$	$2x, -7y$
$-8x^2, 3x^2$	$-8x^2, 3x$
$13xy, -7xy$	$13xy, -7xz$
$5x^2y, 3x^2y$	$5x^2y, 3xy^2$
$x, 4x$	$x, 4$

ರೇಖೆಗಳು



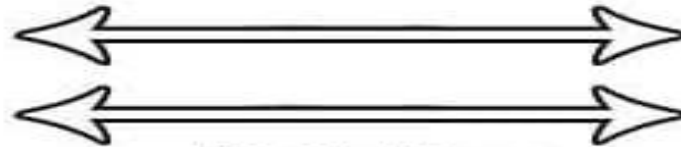
Line



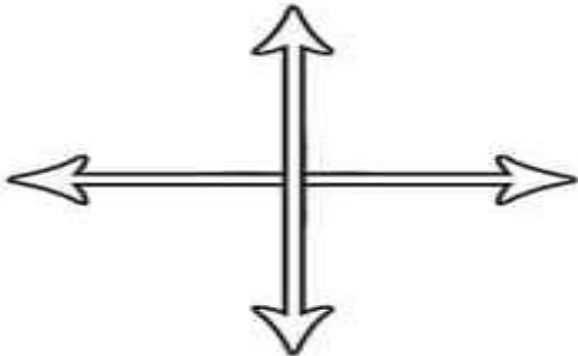
Ray



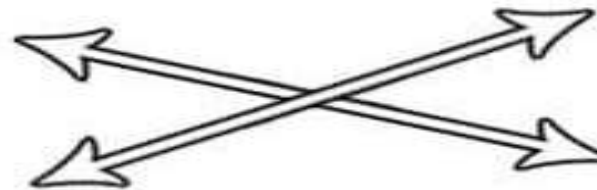
Segment



Parallel Lines

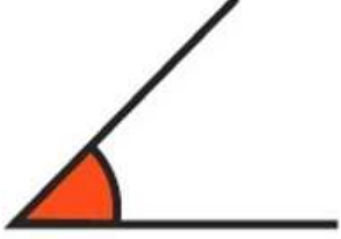


Perpendicular Lines



Intersecting Lines

ಕೋನದ ವಿಧ ತಿಳಿ



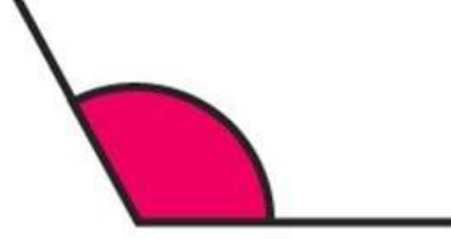
ACUTE ANGLE

Less than 90°



RIGHT ANGLE

Exact 90°



OBTUSE ANGLE

Greater than 90°
and less than 180°



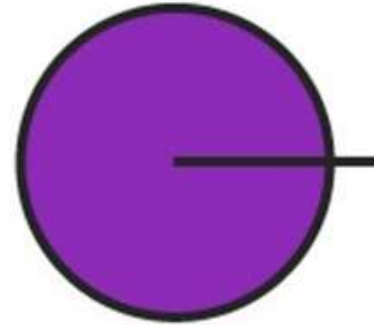
STRAIGHT ANGLE

Exact 180°



REFLEX ANGLE

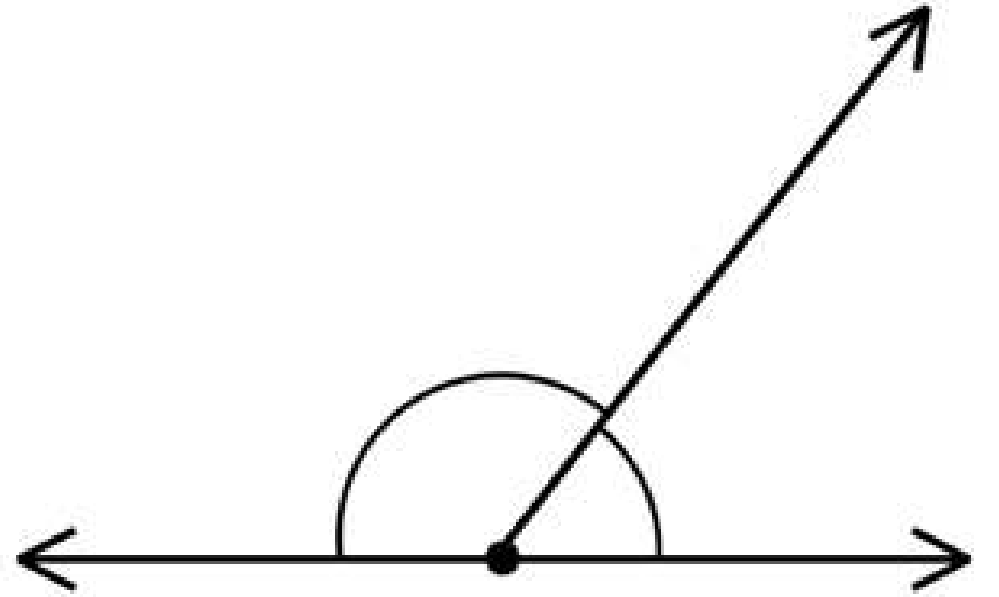
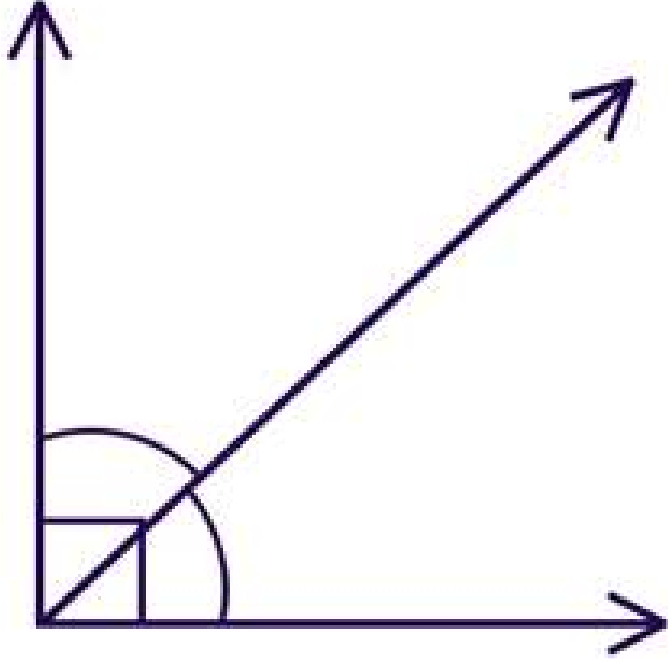
Greater than 180°



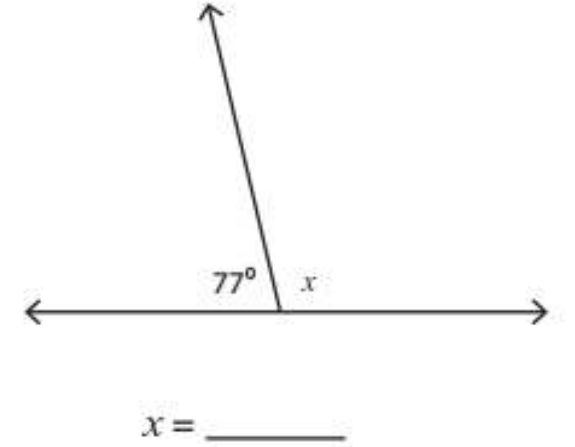
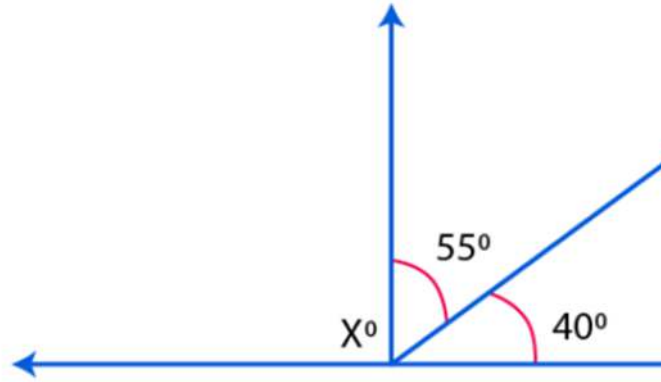
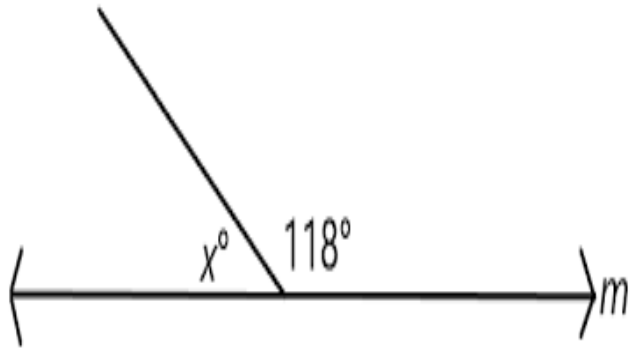
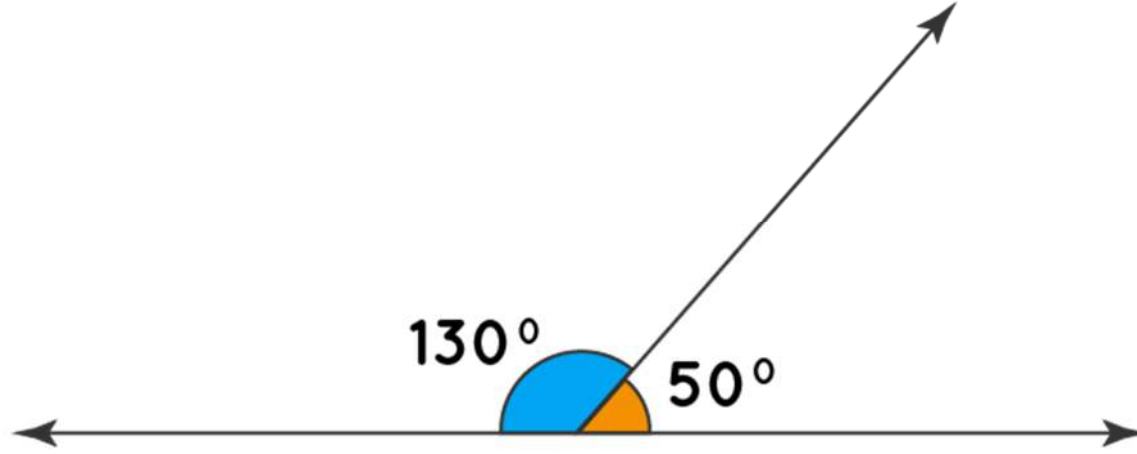
FULL ANGLE

Exact 360°

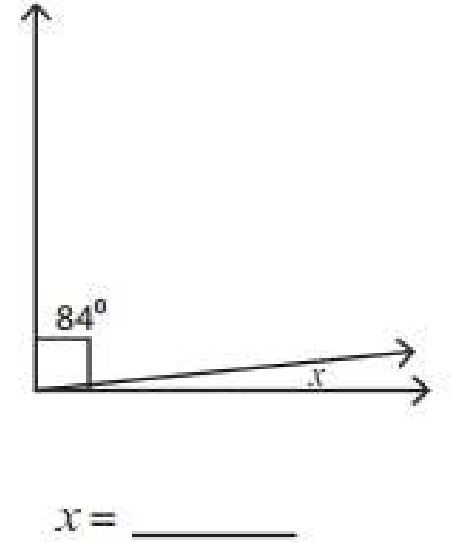
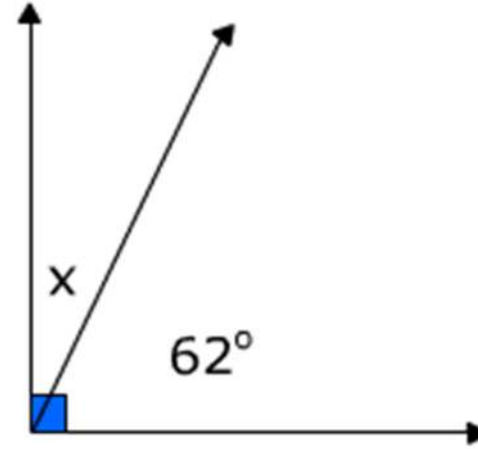
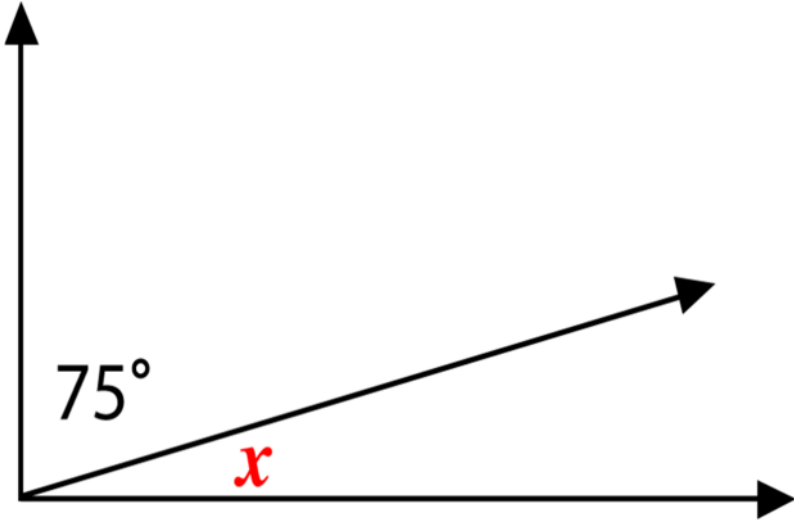
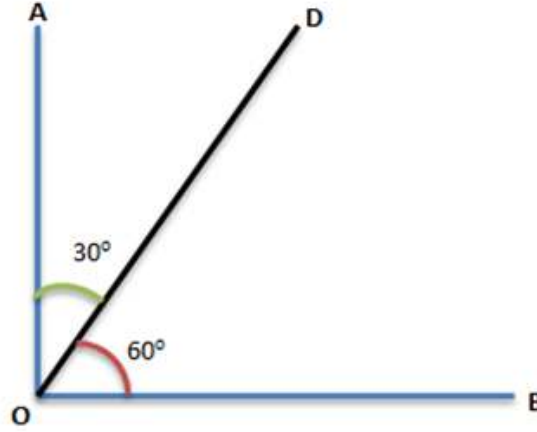
ಪೂರಕ, ಪರಿಪೂರಕ ಕೋನಗಳು



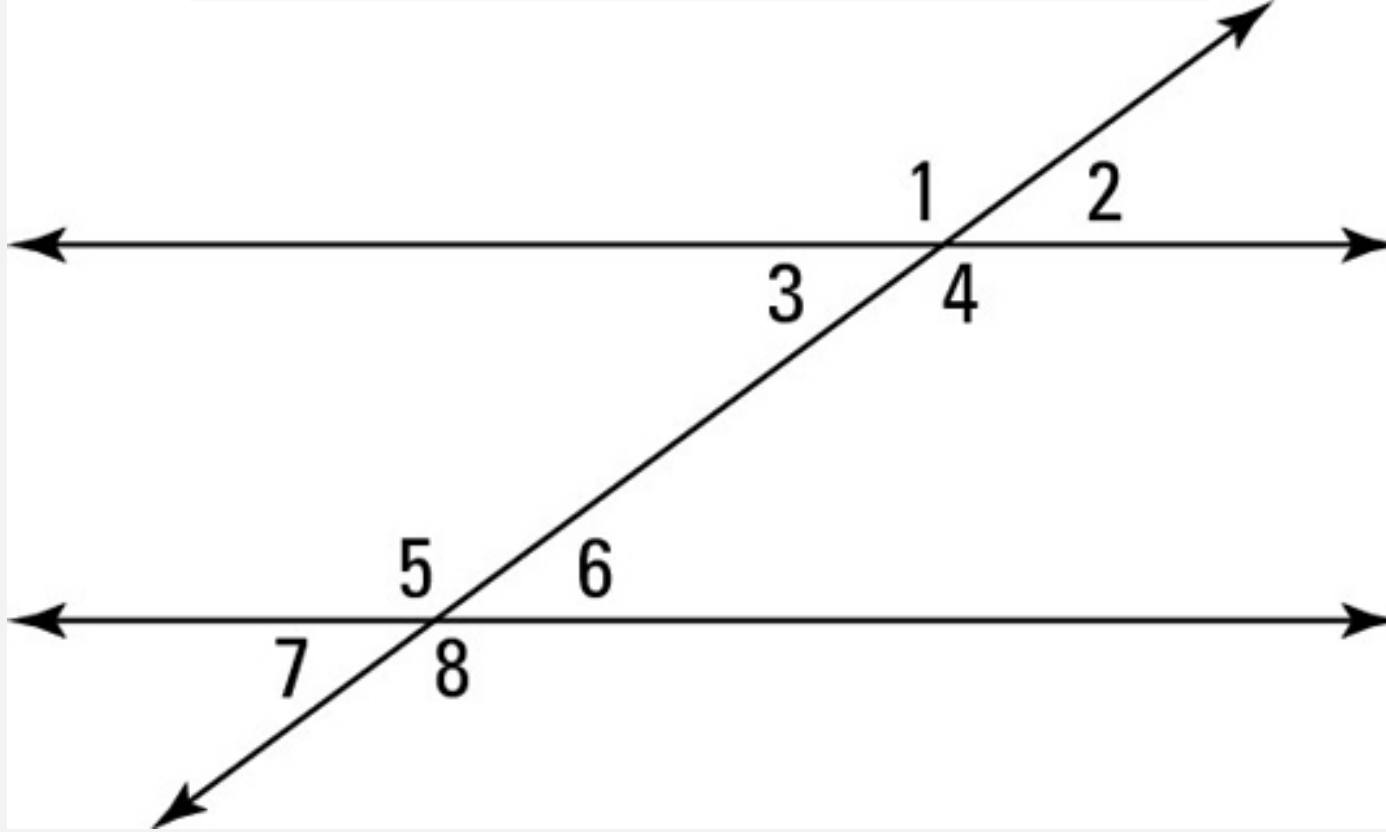
ಉದಾಹರಣೆಯಂತೆ ನೀನು ಮಾಡು



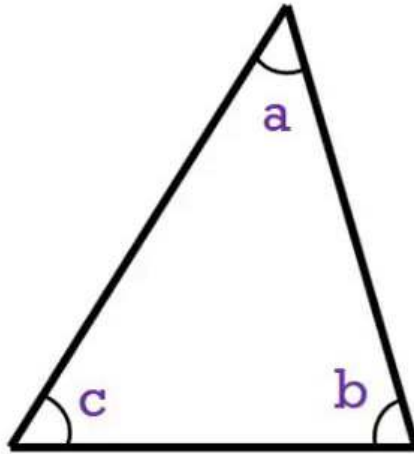
ಉದಾಹರಣೆಯಂತೆ ನೀನು ಮಾಡು



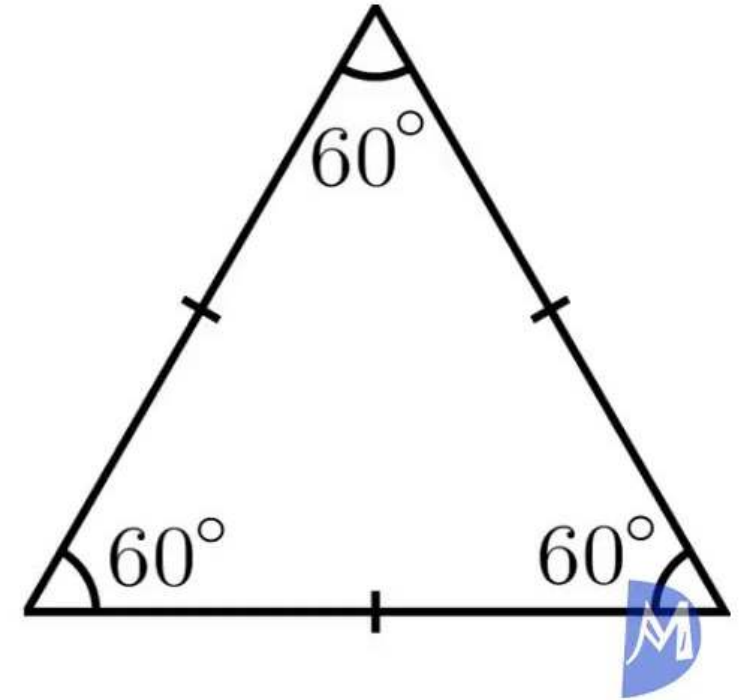
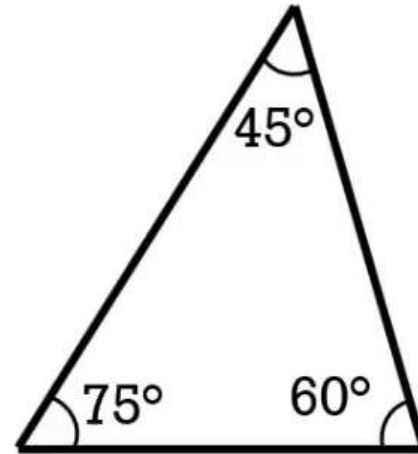
ಕೋನದ ವಿಧ ತಿಳಿ



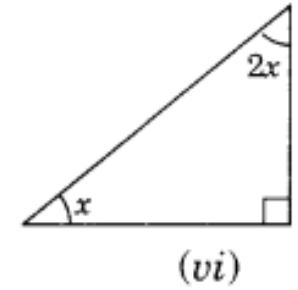
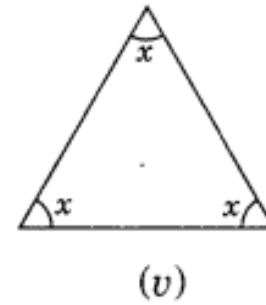
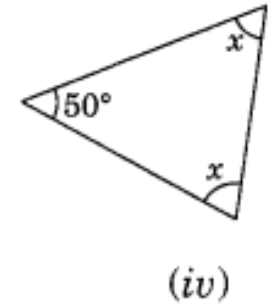
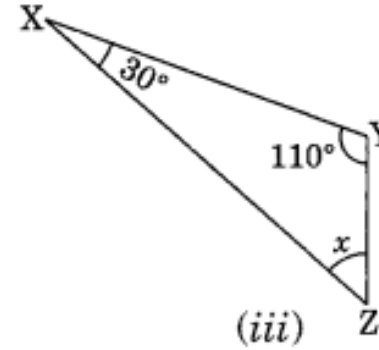
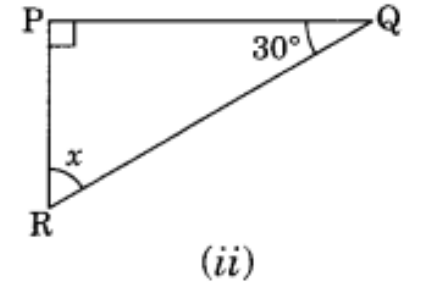
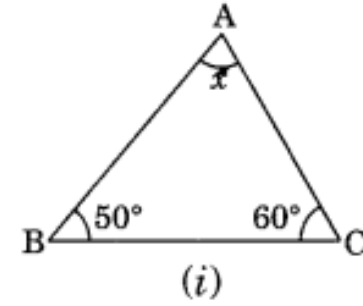
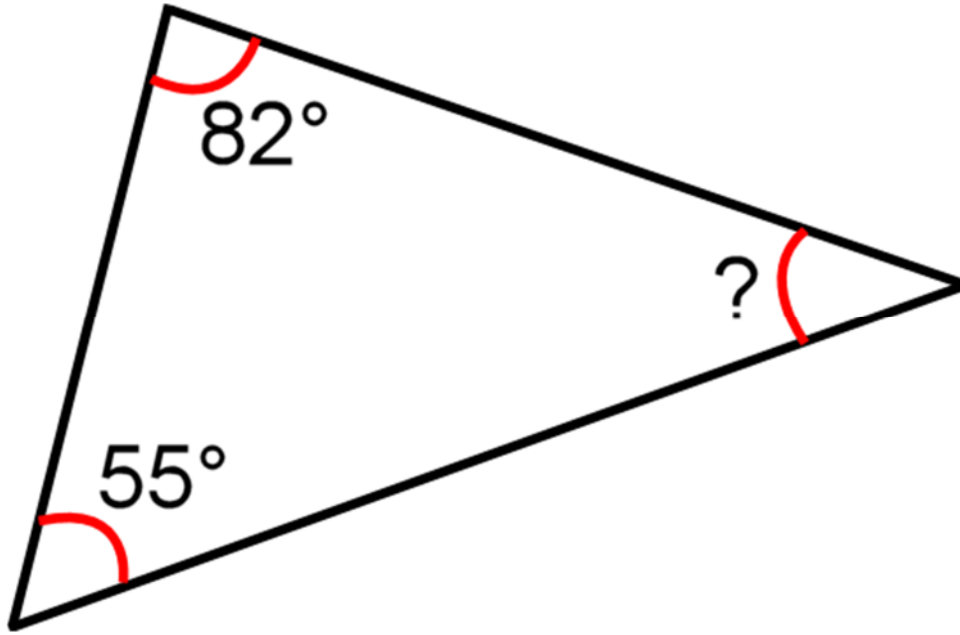
ತ್ರಿಭುಜದ ಗುಣ



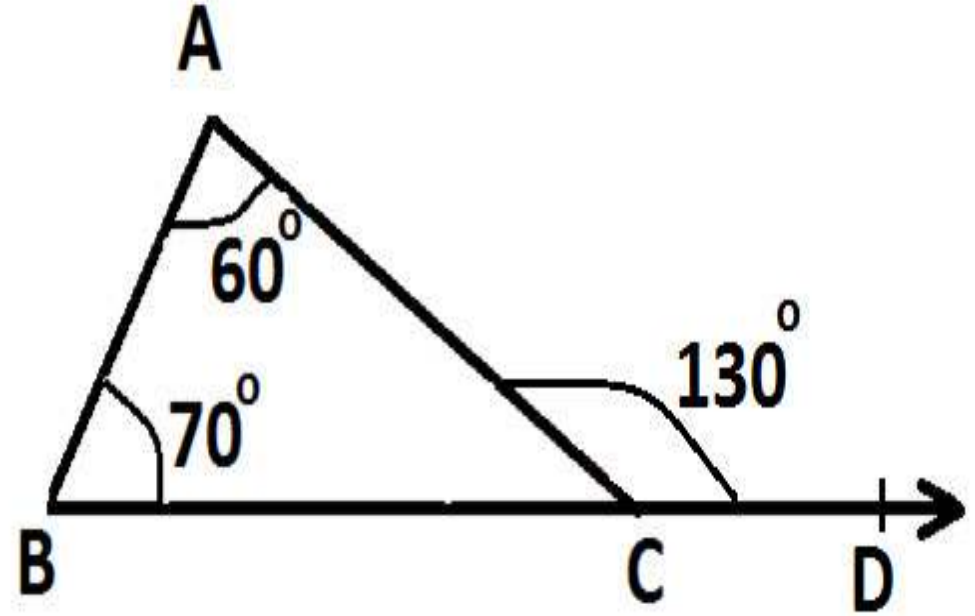
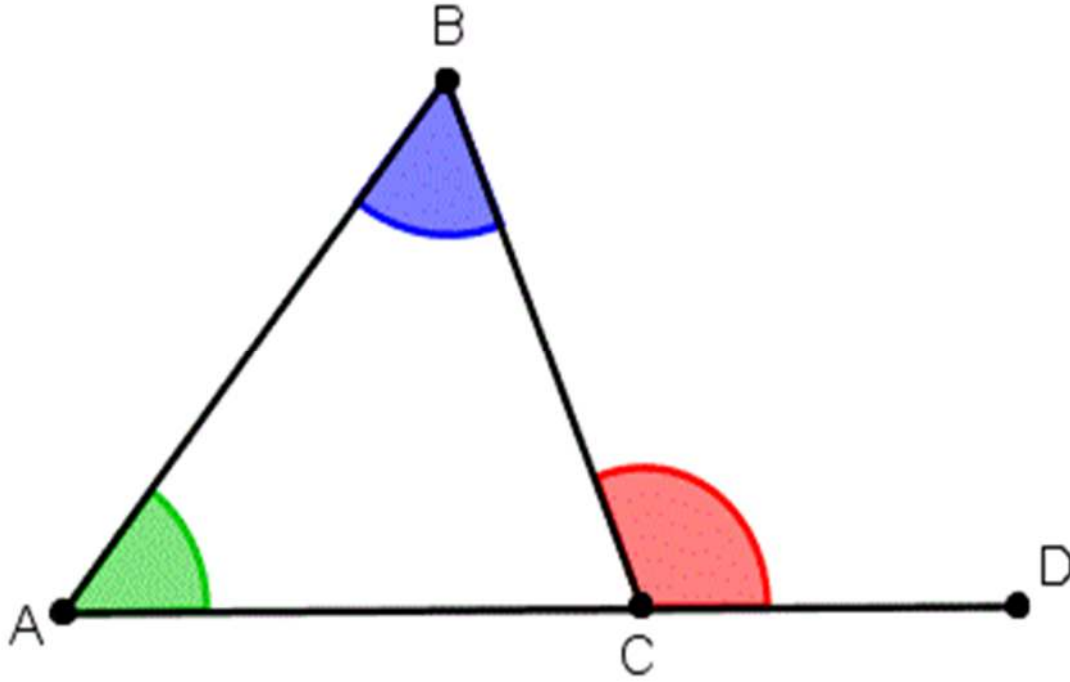
$$\angle a + \angle b + \angle c = 180^\circ$$



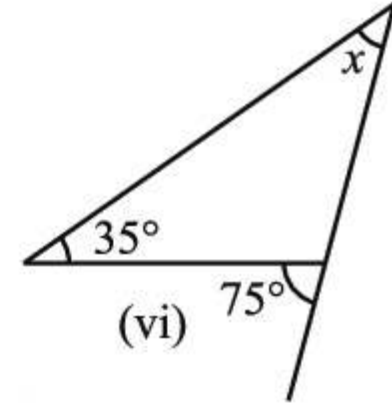
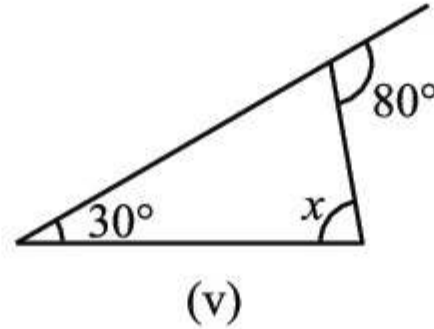
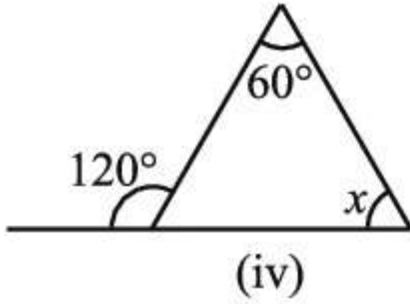
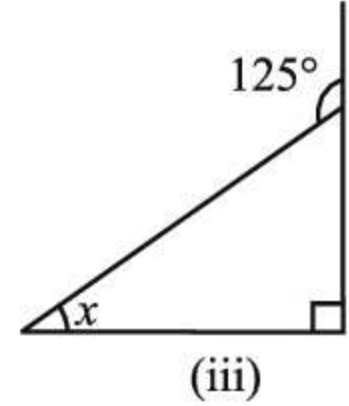
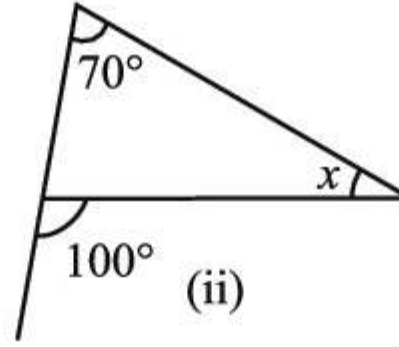
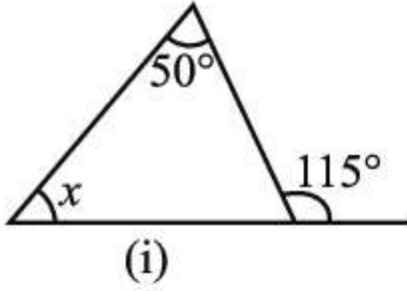
ಕೋನ ಕಂಡುಹಿಡಿ



ಬಹಿರೋನ ಅಂತರಾಭಿಮುಖ ಕೋನಕ್ಕೆ ಸಮ

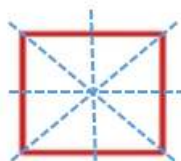

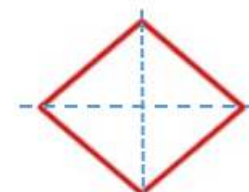
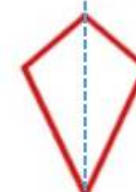



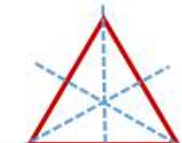



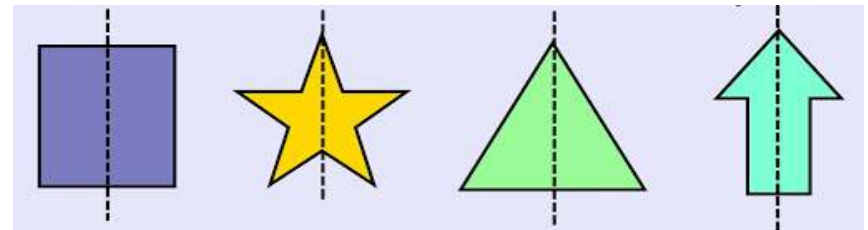
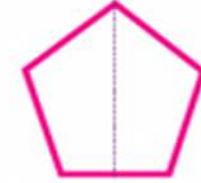
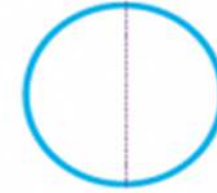
x ನ ಬೆಲೆ ಕಂಡುಹಿಡಿಯಿರಿ



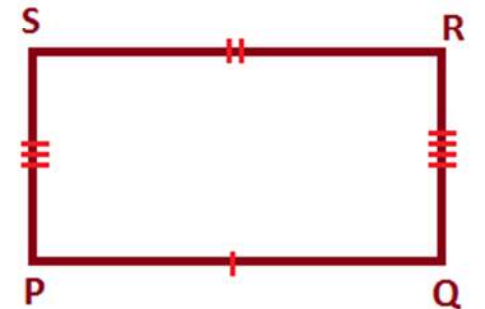
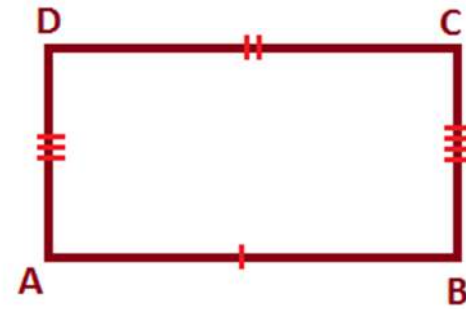
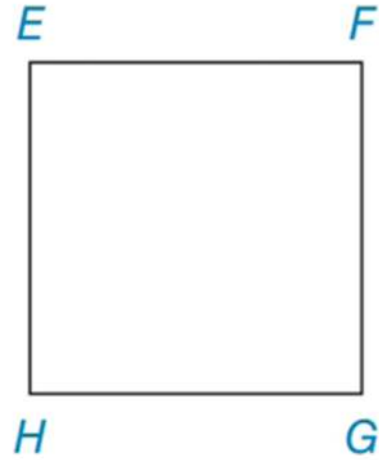
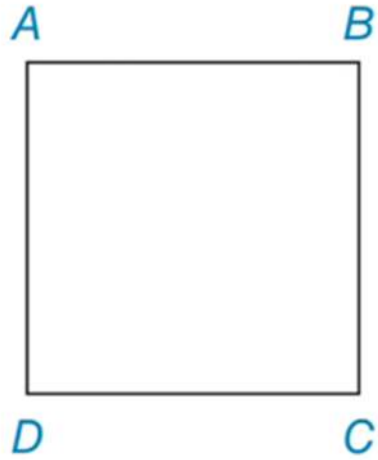
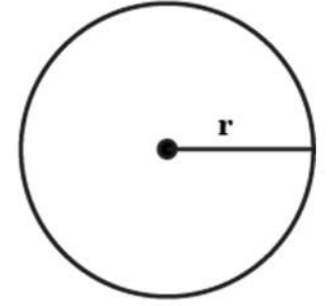
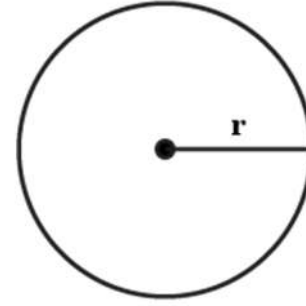
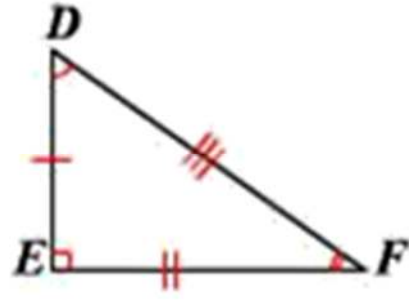
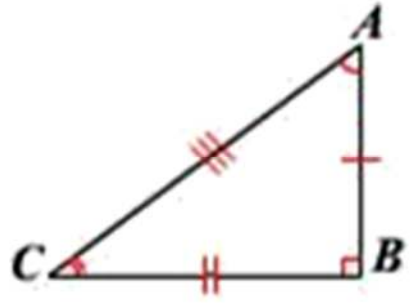
ಸಮಮಿತಿ

Lines of Symmetry

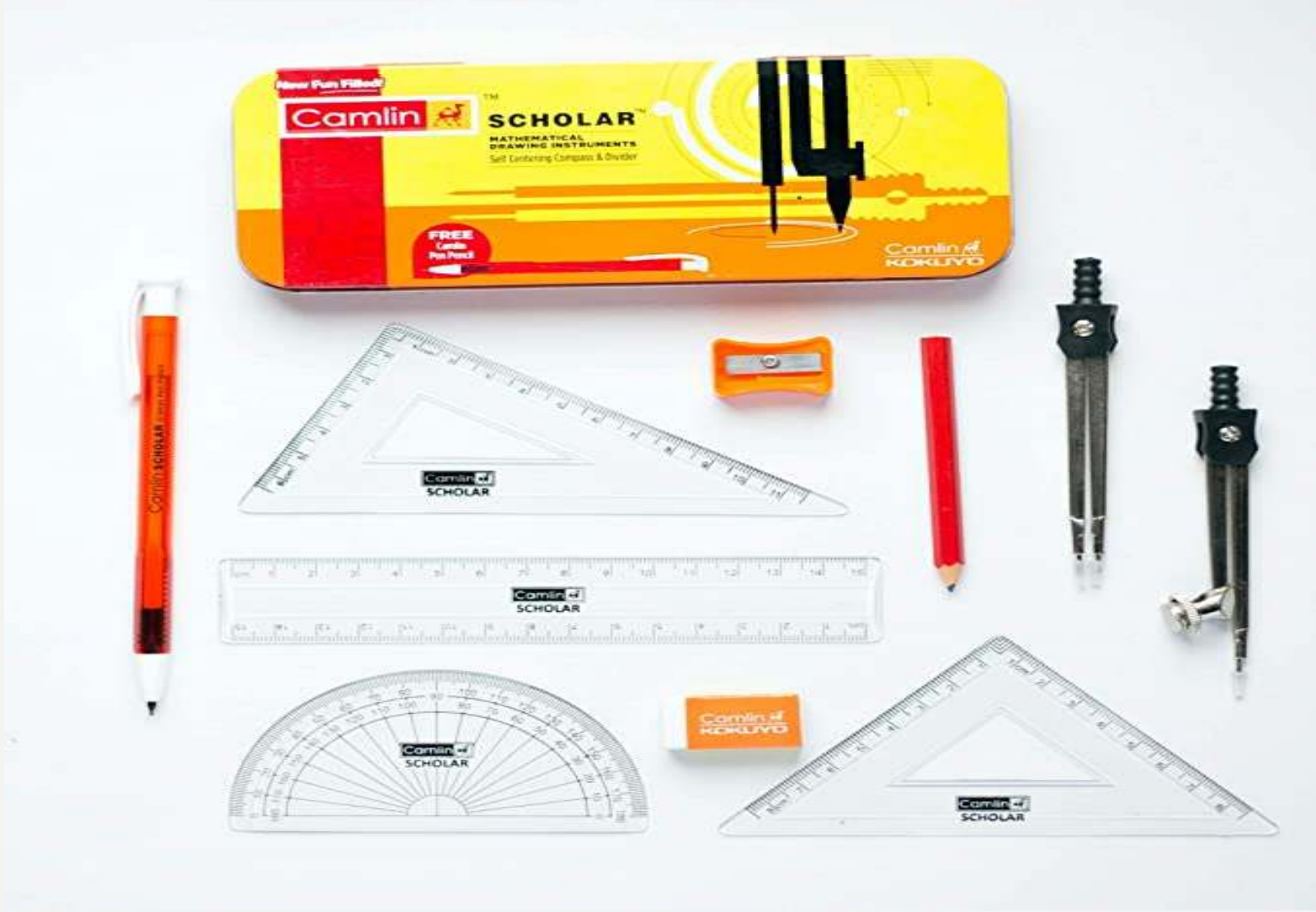
 <p>Square 4 lines of symmetry</p>	 <p>Rectangle 2 lines of symmetry</p>	 <p>Rhombus 2 lines of symmetry</p>
 <p>Kite 1 line of symmetry</p>	 <p>Isosceles Trapezoid 1 line of symmetry</p>	 <p>Trapezoid No lines of symmetry</p>
 <p>Parallelogram No lines of symmetry</p>	 <p>Equilateral Triangle 3 lines of symmetry</p>	 <p>Isosceles Triangle 1 line of symmetry</p>



ಸರ್ವಸಮ ಆಕೃತಿಗಳು

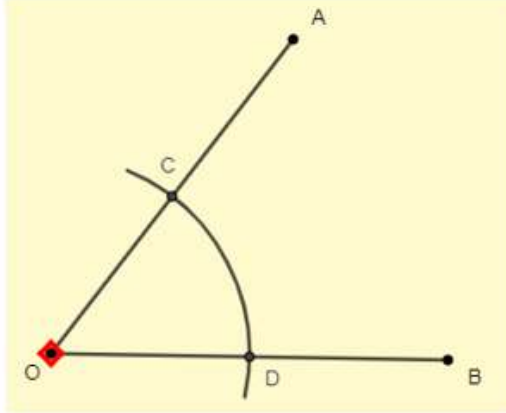


ರೇಖಾಗಣಿತದ ಸಾಧನಗಳು

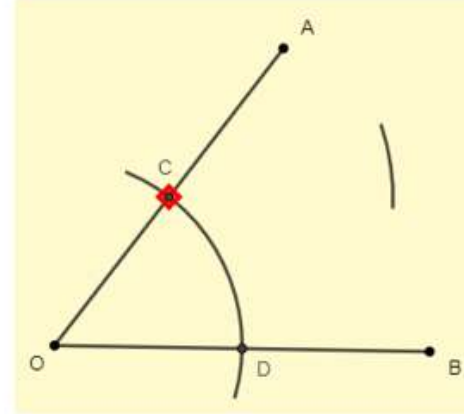


ಹಂತ ನೋಡಿ ನೀನೂ ರಚಿಸು

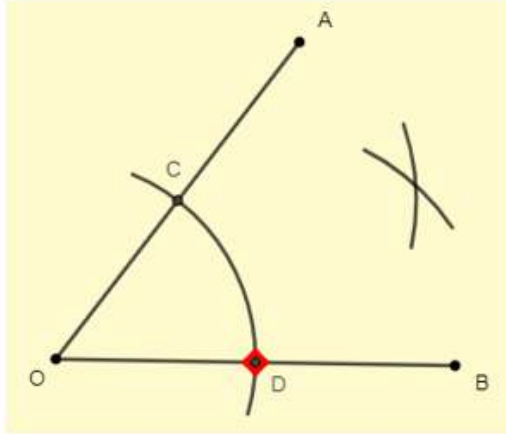
Construction of Angle Bisector



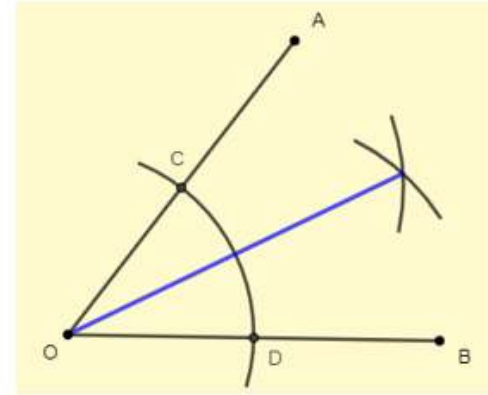
Step 1: Center O, radius less than OA



Step 2: Center C, radius R

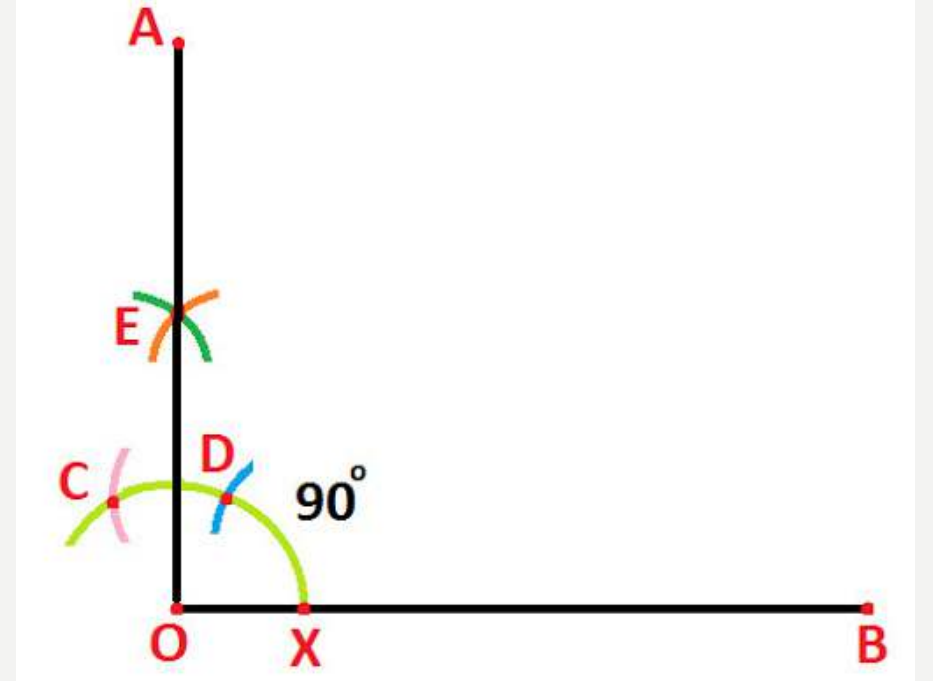
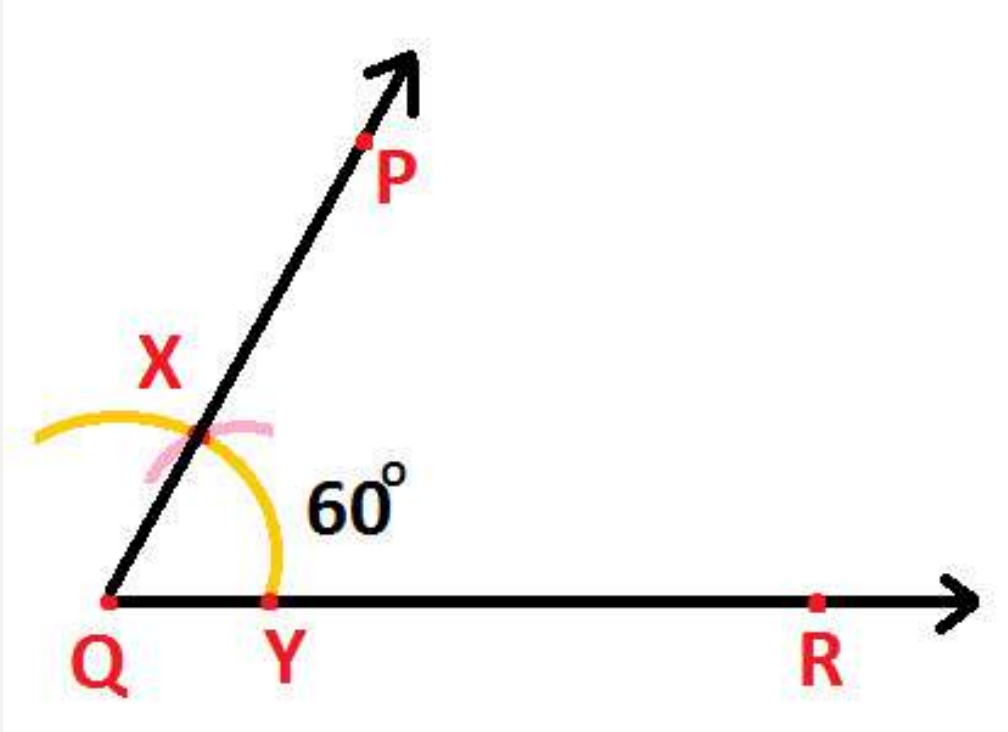


Step 3: Center D, radius R

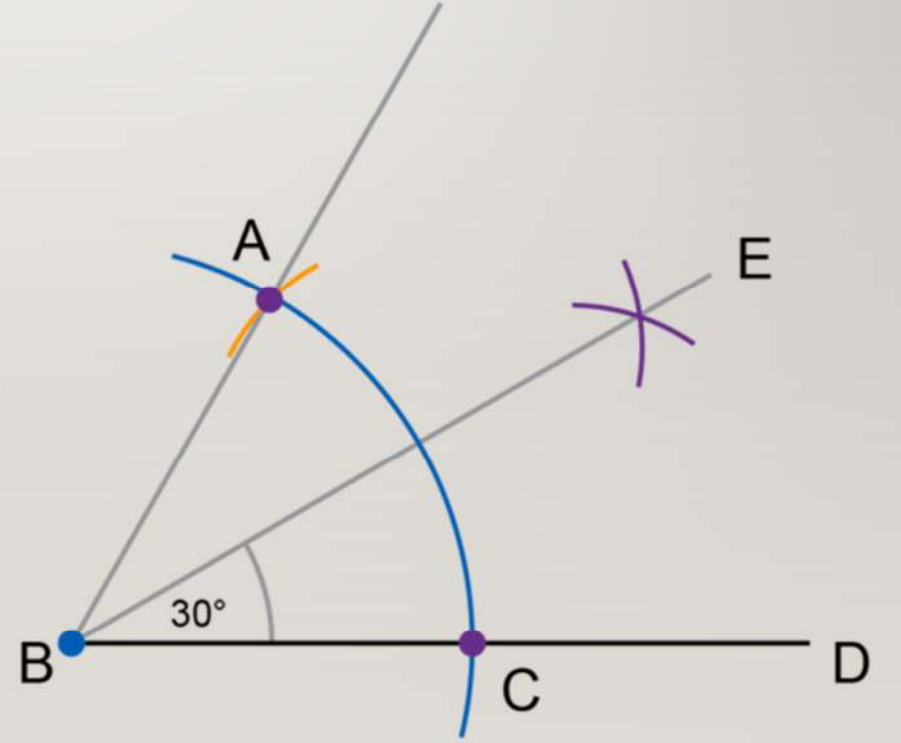
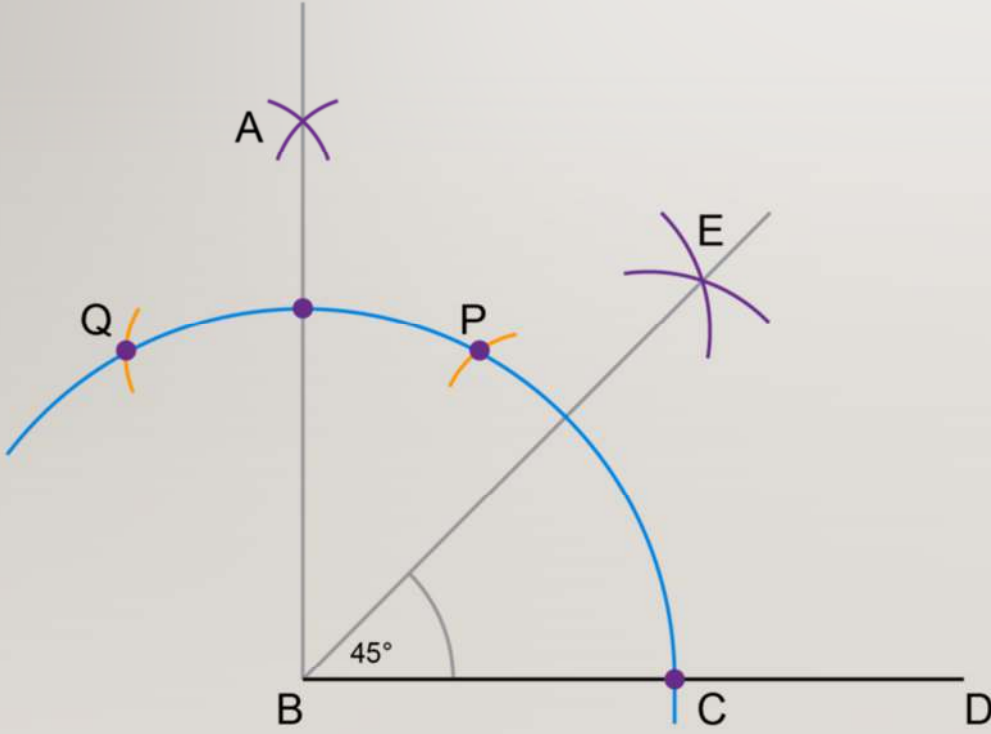


Step 4: Connect O to intersected arcs

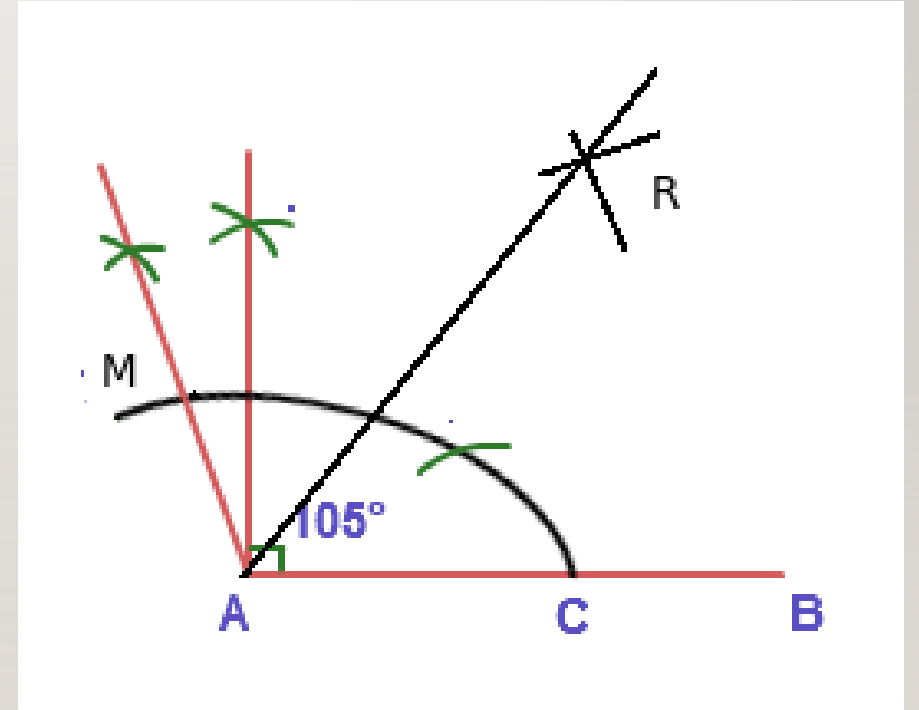
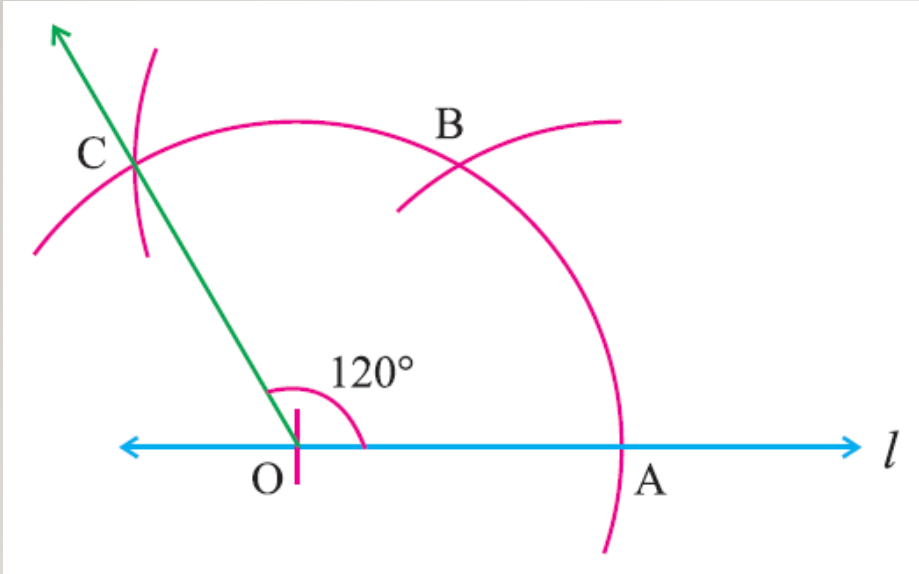
ಚಿತ್ರ ನೋಡಿ ನೀನೂ ರಚಿಸು



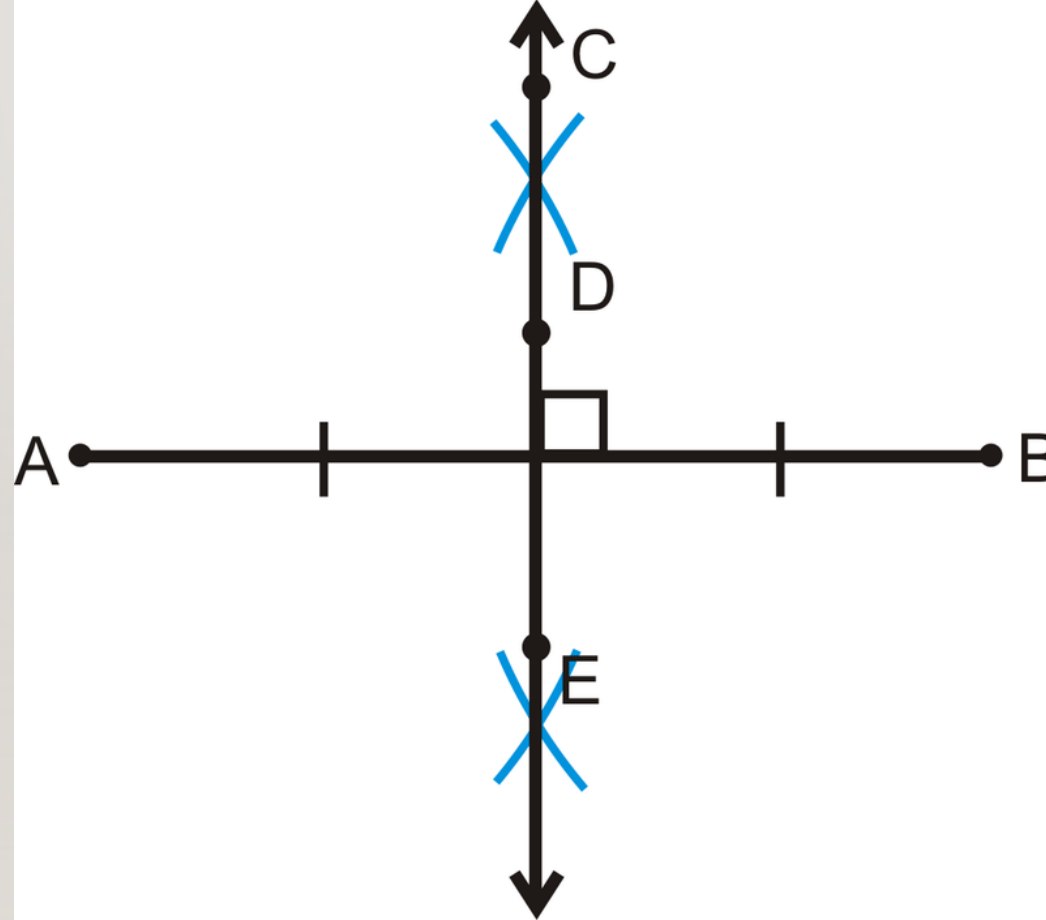
ಚಿತ್ರ ನೋಡಿ ನೀನೂ ರಚಿಸು



ಚಿತ್ರ ನೋಡಿ ನೀನೂ ರಚಿಸು



ಚಿತ್ರ ನೋಡಿ ನೀನೂ ರಚಿಸು



ಘಾತಸೂಚಿ, ಆಧಾರ ಸಂಖ್ಯೆ ತಿಳಿ

Power	Exponent	Base
5^4	4	5
8^3	3	8
x^7	7	x
y^5	5	y
a^n	n	a

ಘಾತಗಳ ಜ್ಞಾನ

$$2^1 = 2$$

$$2^2 = 2 \times 2 = 4$$

$$2^3 = 2 \times 2 \times 2 = 8$$

$$2^4 = 2 \times 2 \times 2 \times 2 = 16$$

$$2^5 = 2 \times 2 \times 2 \times 2 \times 2 = 32$$

$$2^6 = 2 \times 2 \times 2 \times 2 \times 2 \times 2 = 64$$

$$2^7 = 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 = 128$$

$$2^8 = 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 = 256$$

$$10\ 000 = 10^4$$

$$1\ 000 = 10^3$$

$$100 = 10^2$$

$$10 = 10^1$$

$$1 = 10^0$$

$$0.1 = 10^{-1}$$

$$0.01 = 10^{-2}$$

$$0.001 = 10^{-3}$$

$$0.0001 = 10^{-4}$$

ನಿಯಮ ನೆನೆ

1

$$a^m \times a^n = a^{m+n}$$

2

$$\frac{a^m}{a^n} = a^{m-n}$$

3

$$(a^m)^n = a^{mn}$$

4

$$(a^m \times b^m) = (a \times b)^m$$

5

$$\frac{a^m}{b^m} = \left(\frac{a}{b}\right)^m$$

ಉದಾಹರಣೆ ನೀನೂ ಕಲಿ

Law	Example
$a^m a^n = a^{m+n}$	$2^3 2^4 = 2^{3+4} = 2^7 = 128$
$(a^m)^n = a^{mn}$	$(2^3)^4 = 2^{3 \cdot 4} = 2^{12} = 4096$
$(ab)^n = a^n b^n$	$(20)^3 = (2 \cdot 10)^3 = 2^3 \cdot 10^3 = 8 \cdot 1000 = 8000$
$\left(\frac{a}{b}\right)^n = \frac{a^n}{b^n}$	$\left(\frac{2}{5}\right)^3 = \frac{2^3}{5^3} = \frac{8}{125}$
$\frac{a^m}{a^n} = a^{m-n}$	$\frac{2^5}{2^3} = 2^{5-3} = 2^2 = 4$
$\frac{a^m}{a^n} = \frac{1}{a^{n-m}}$	$\frac{2^3}{2^5} = \frac{1}{2^{5-3}} = \frac{1}{2^2} = \frac{1}{4}$

ಅವಯವ ತಿಳಿ

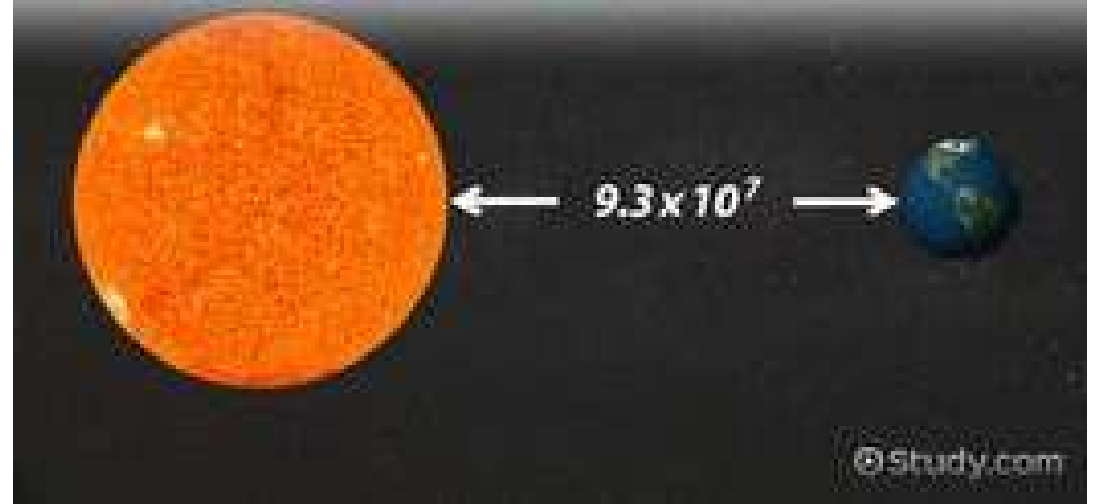


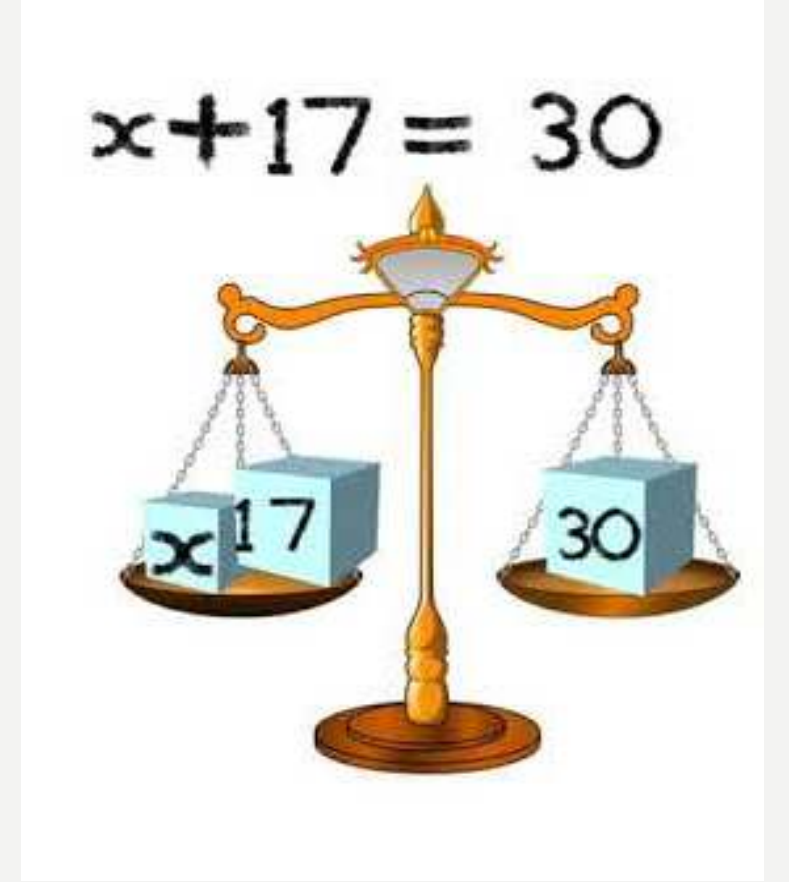
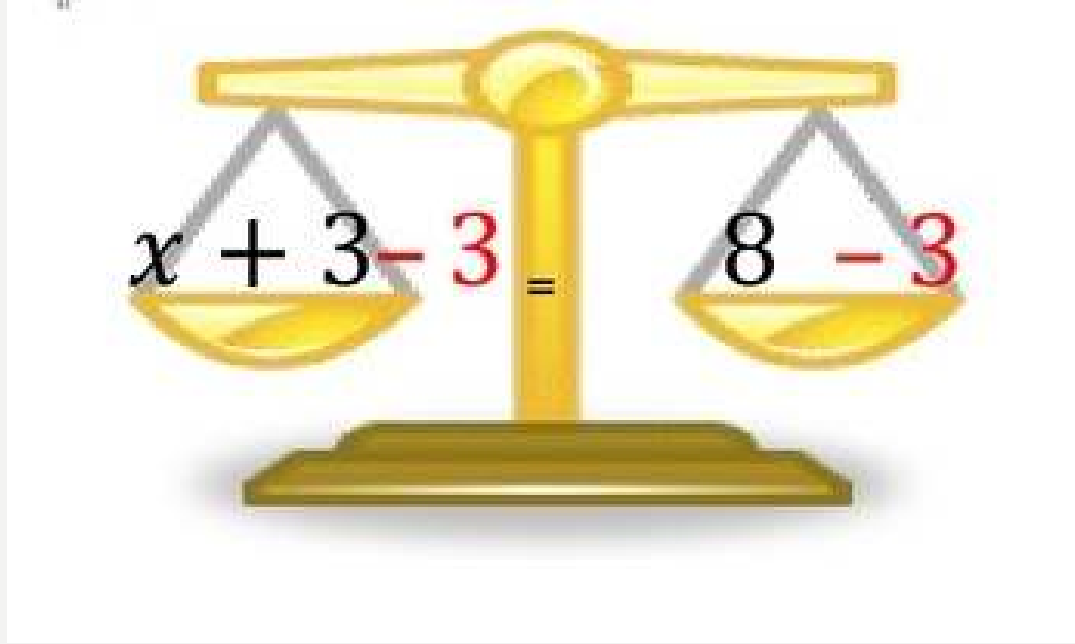
Image Source: <http://www.inquisitr.com>

$$\underline{1.496} \times 10^8$$

149 600 000 has FOUR Significant Figures

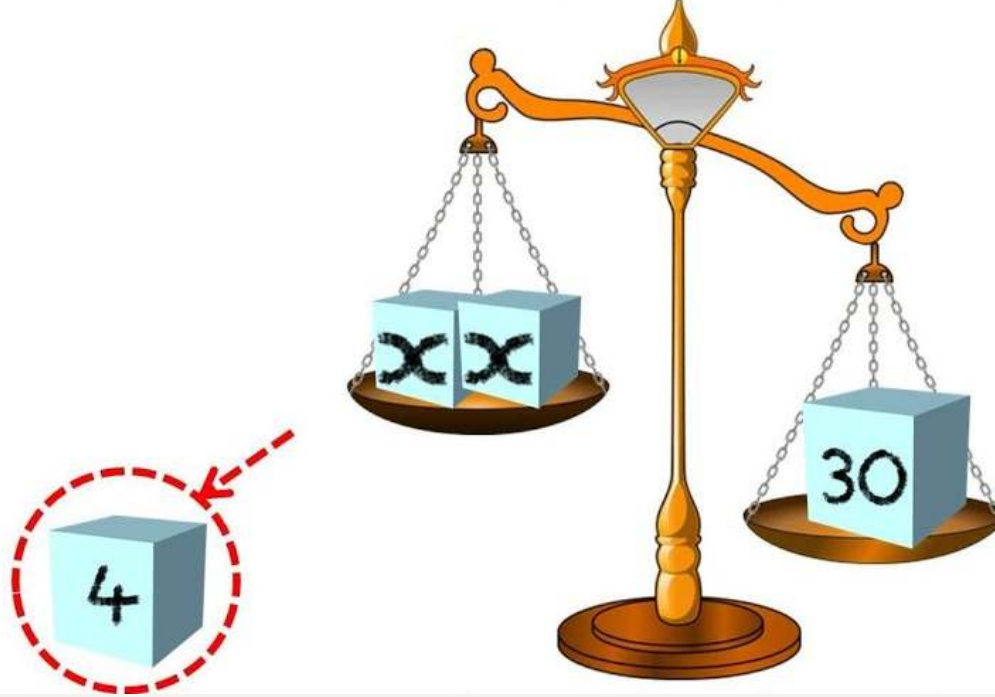


ತಕ್ಕಡಿಯಿಂದ ಸಮತೆ

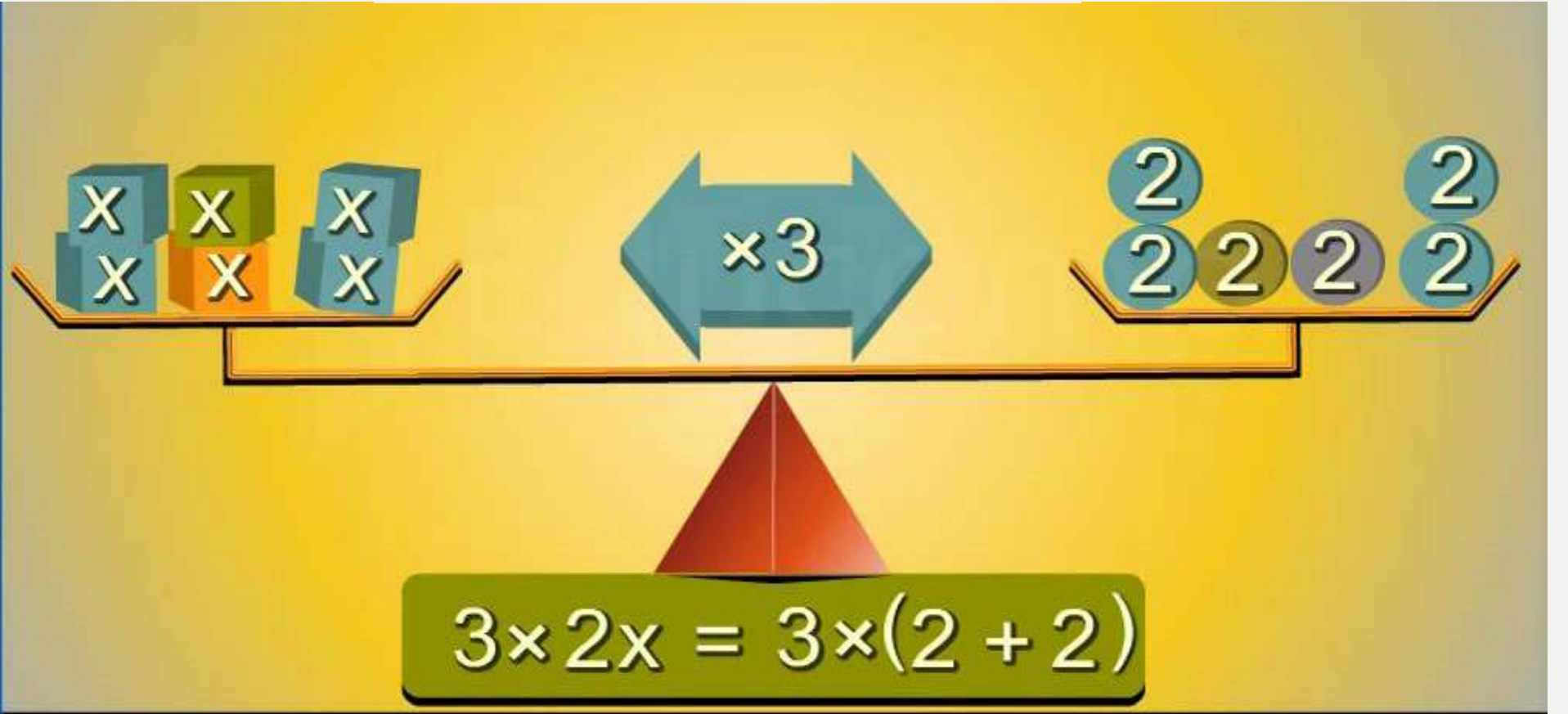


ತಕ್ಕಡಿಯಿಂದ ಸಮತೆ

$$2x+4 = 30$$



ತಕ್ಕಡಿಯಿಂದ ಸಮತೆ



ರೇಖಾತ್ಮಕ ಸಮೀಕರಣ ಬಿಡಿಸಿ ಕಲಿ

1

$$x - 5 = 10 - 3x$$

$$4x - 5 = 10$$

$$4x = 15$$

$$x = \frac{15}{4} = 3\frac{3}{4}$$

2

$$x - 5 = 10 - 3x$$

$$-5 = 10 - 4x$$

$$-15 = -4x$$

$$\frac{-15}{-4} = x$$

$$x = \frac{15}{4} = 3\frac{3}{4}$$

3

$$x - 5 = 10 - 3x$$

$$x = 15 - 3x$$

$$0 = 15 - 4x$$

$$4x = 15$$

$$x = \frac{15}{4} = 3\frac{3}{4}$$

4

$$x - 5 = 10 - 3x$$

$$-5 = 10 - 2x$$

$$-15 = -2x$$

$$\frac{-15}{-2} = x$$

ರೇಖಾತ್ಮಕ ಸಮೀಕರಣ ಬಿಡಿಸಿ ಕಲಿ

$$\frac{x}{2} + \frac{x}{5} = 14 \Rightarrow \frac{x}{2} + \frac{x}{5} = 14$$

$$\frac{5x + 2x}{10} = 14 \Rightarrow 5x + 2x = 14 \times 10$$

$$\Rightarrow 5x + 2x = 140 \Rightarrow 7x = 140$$

$$\Rightarrow x = \frac{140}{7} = 20$$

$$\therefore x = 20$$

Let the number = x

According to the condition

$$x - \frac{1}{4}x = 24$$

$$\Rightarrow \frac{4x - x}{4} = 24 \Rightarrow \frac{3x}{4} = 24$$

$$\Rightarrow x = 24 \times \frac{4}{3} \Rightarrow x = 8 \times 4$$

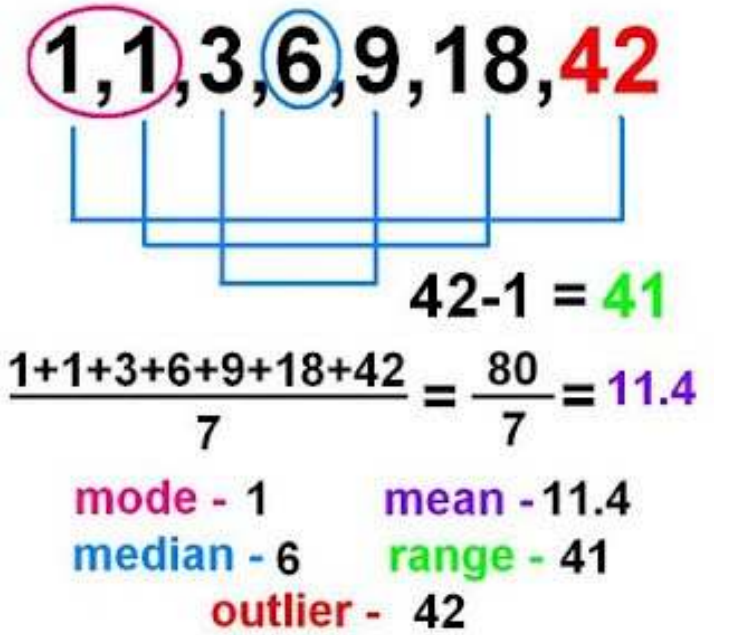
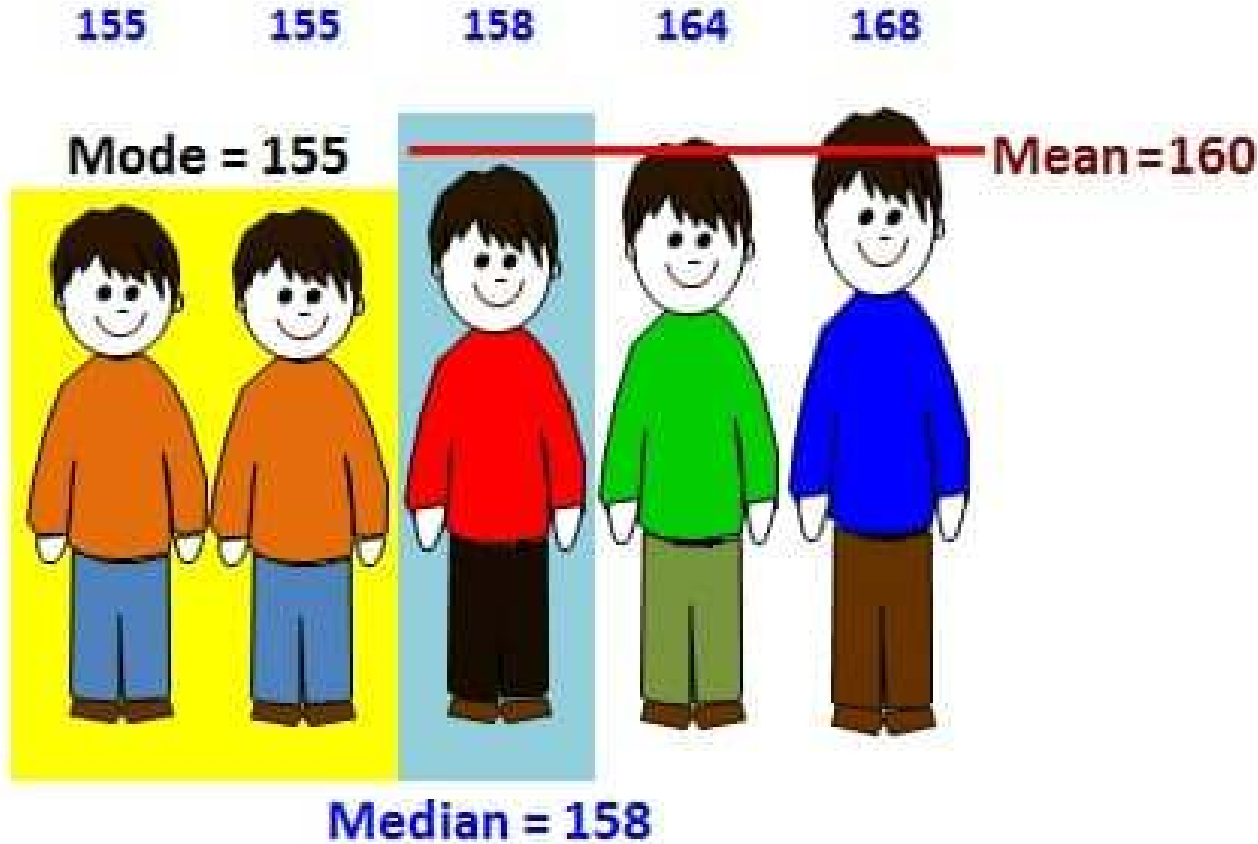
$$\Rightarrow x = 32$$

$$\therefore \text{Number} = 32$$

ಹೊಂದಿಸಿ ಬರೆಯಿರಿ

A	B
$x + \frac{1}{3} = \frac{4}{9}$	$x = \frac{1}{9}$
$\frac{2}{3}x = 6$	$x = 9$
$x \div \frac{1}{6} = 5$	$x = \frac{5}{6}$
$x - \frac{2}{9} = \frac{2}{3}$	$x = \frac{8}{9}$
$\frac{1}{3}x = 6$	$x = 18$
$\frac{2}{3} \div x = 2$	$x = \frac{1}{3}$
$\frac{1}{6}x = 5$	$x = 30$
$x + \frac{2}{3} = \frac{8}{9}$	$x = \frac{2}{9}$

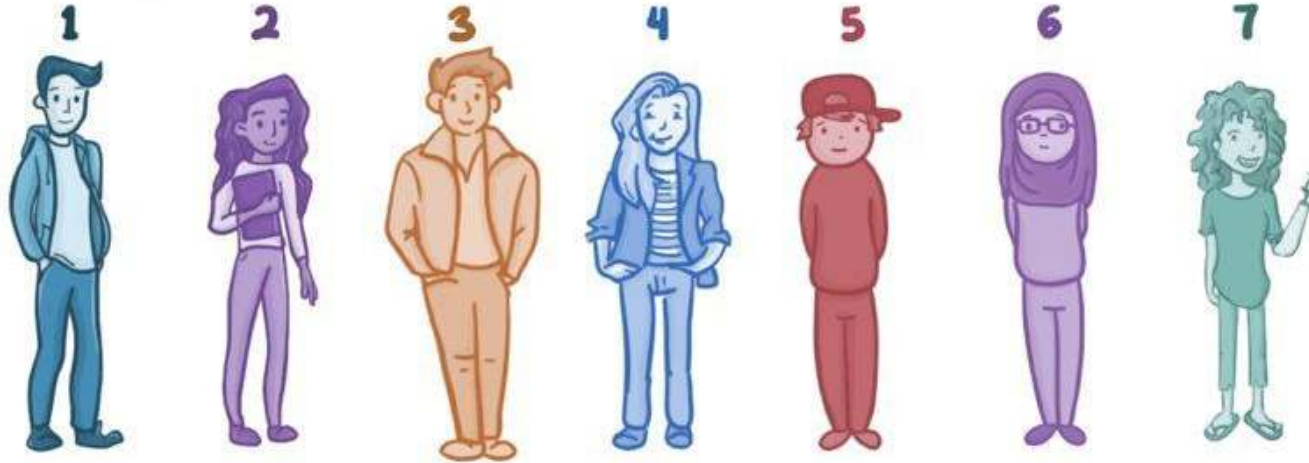
ಸರಾಸರಿ, ಮಧ್ಯಾಂಕ, ಬಹುಲಕ



ಎತ್ತರಗಳ ಸರಾಸರಿ

MEAN = AVERAGE

TEST / 100 POINTS



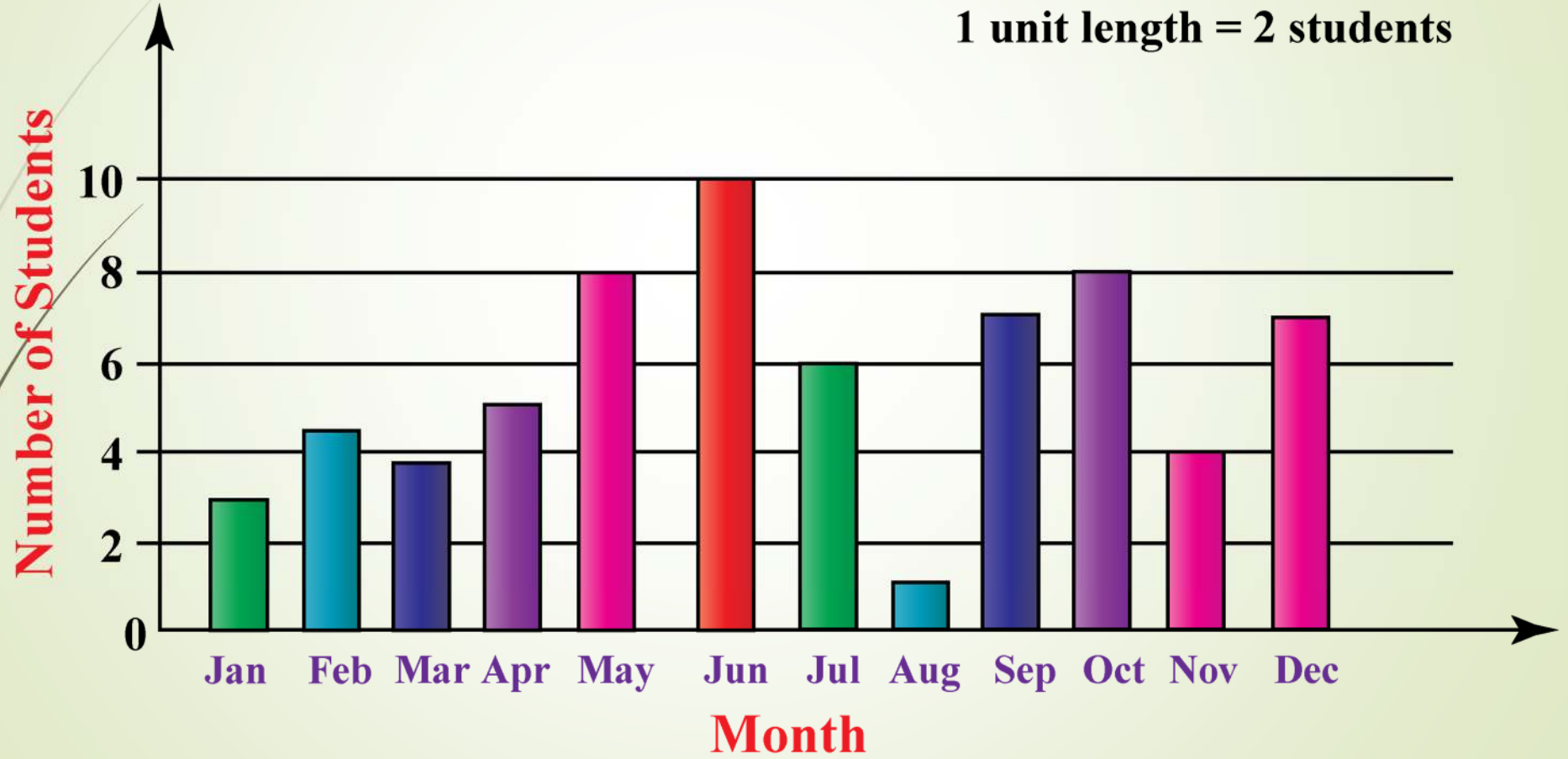
$$\frac{17 + 19 + 20 + 20 + 61 + 61 + 62}{7} = \frac{260}{7} = 37.14$$

$$\bar{X} = \frac{(X_1 + X_2, \dots, X_n)}{n}$$

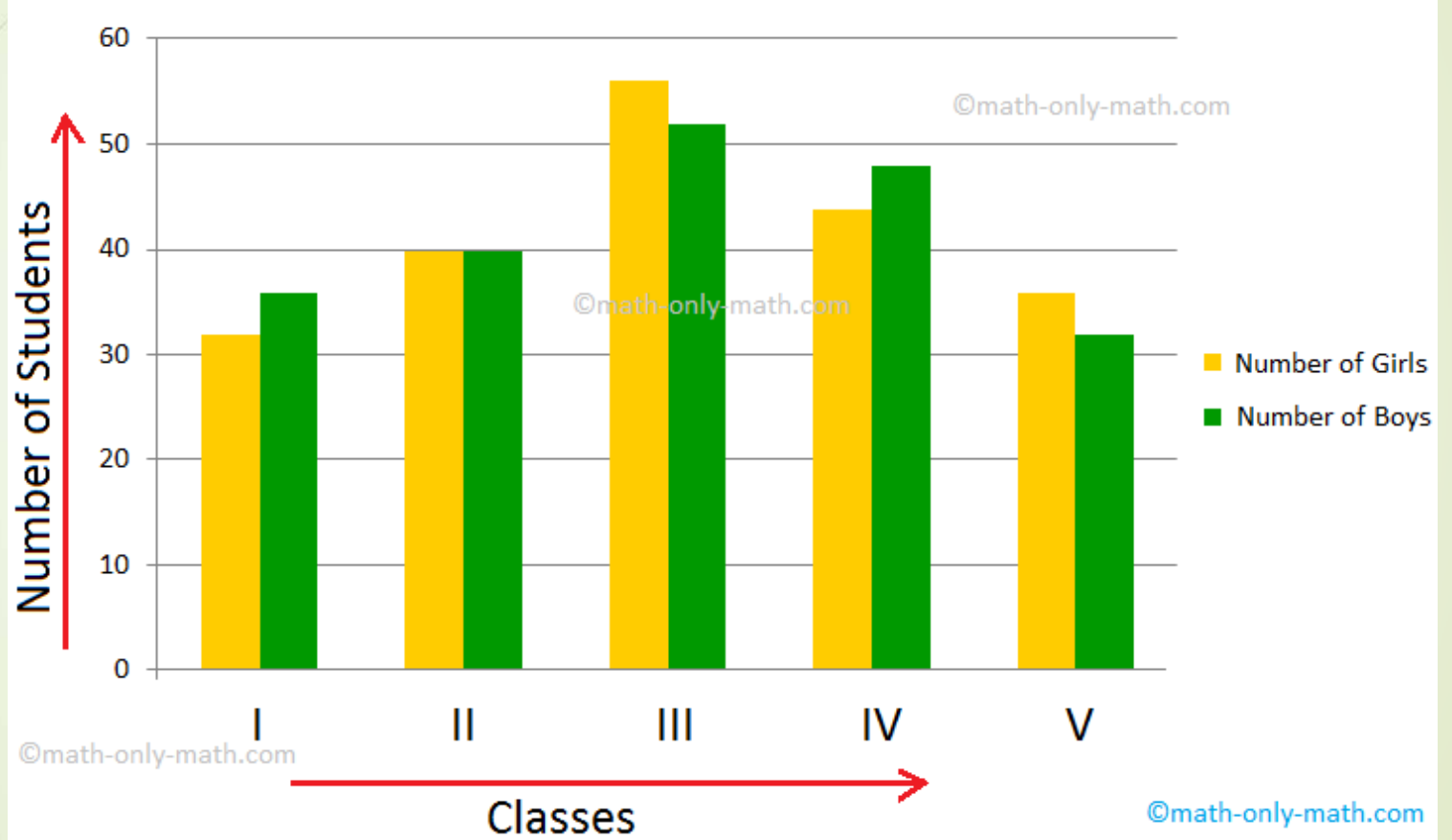
SUM of EACH VALUE in a DATA SET
TOTAL N° of DATA POINTS

ನಕ್ಷೆಯ ವಿಧ ತಿಳಿ

Birthday of Students by Month



ನಕ್ಕೆಯ ವಿಧ ತಿಳಿ



ಸಂಭವನೀಯತೆ



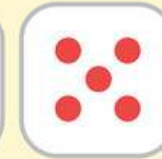
ಆಟದಿಂದ ಪಾಠ

91	92	93	94	95	96	97	98	99	100
81	82	83	84	85	86	87	88	89	90
71	72	73	74	75	76	77	78	79	80
61	62	63	64	65	66	67	68	69	70
51	52	53	54	55	56	57	58	59	60
41	42	43	44	45	46	47	48	49	50
31	32	33	34	35	36	37	38	39	40
21	22	23	24	25	26	27	28	29	30
11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10

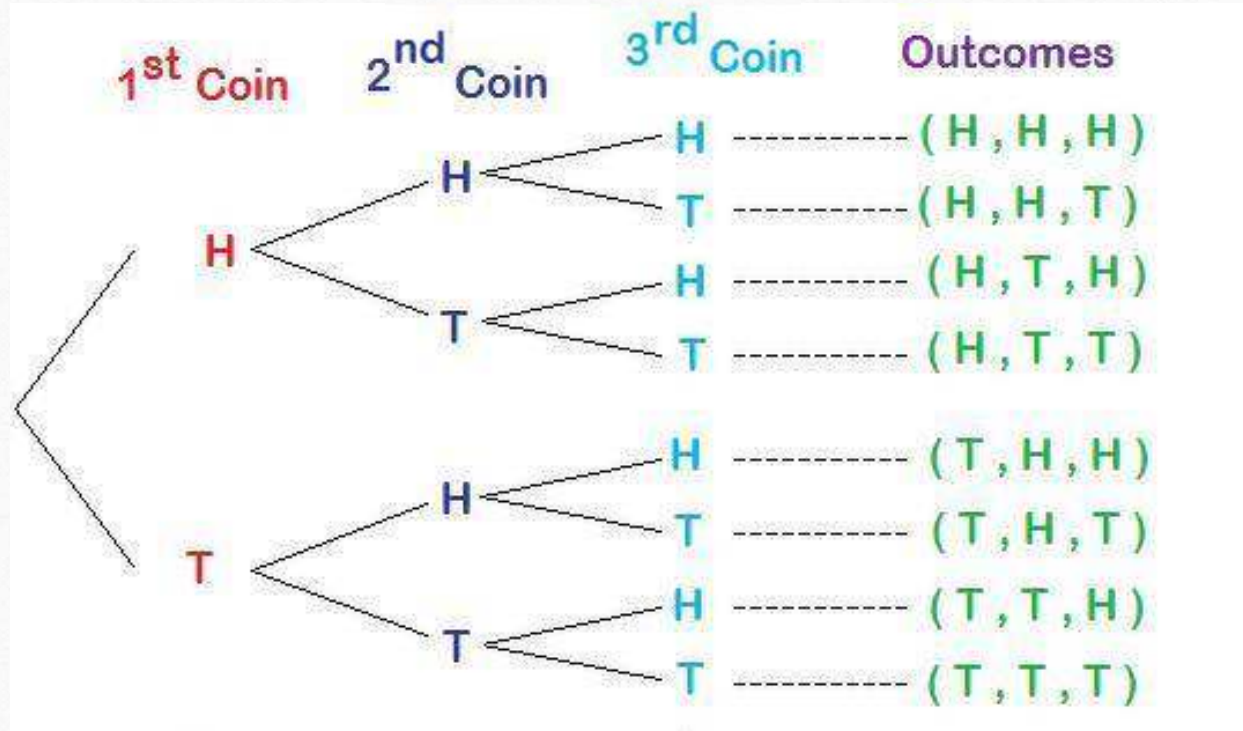
ಹಾವು

ಬಣಿ

ಆಟ



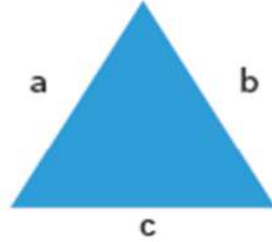
ଫଳତ



ಚಿತ್ರ ನೋಡಿ ಸುತ್ತಳತೆ ತಿಳಿ

PERIMETER

Formulas



TRIANGLE
 $a + b + c$



SQUARE
 $4 \times \text{Side}$

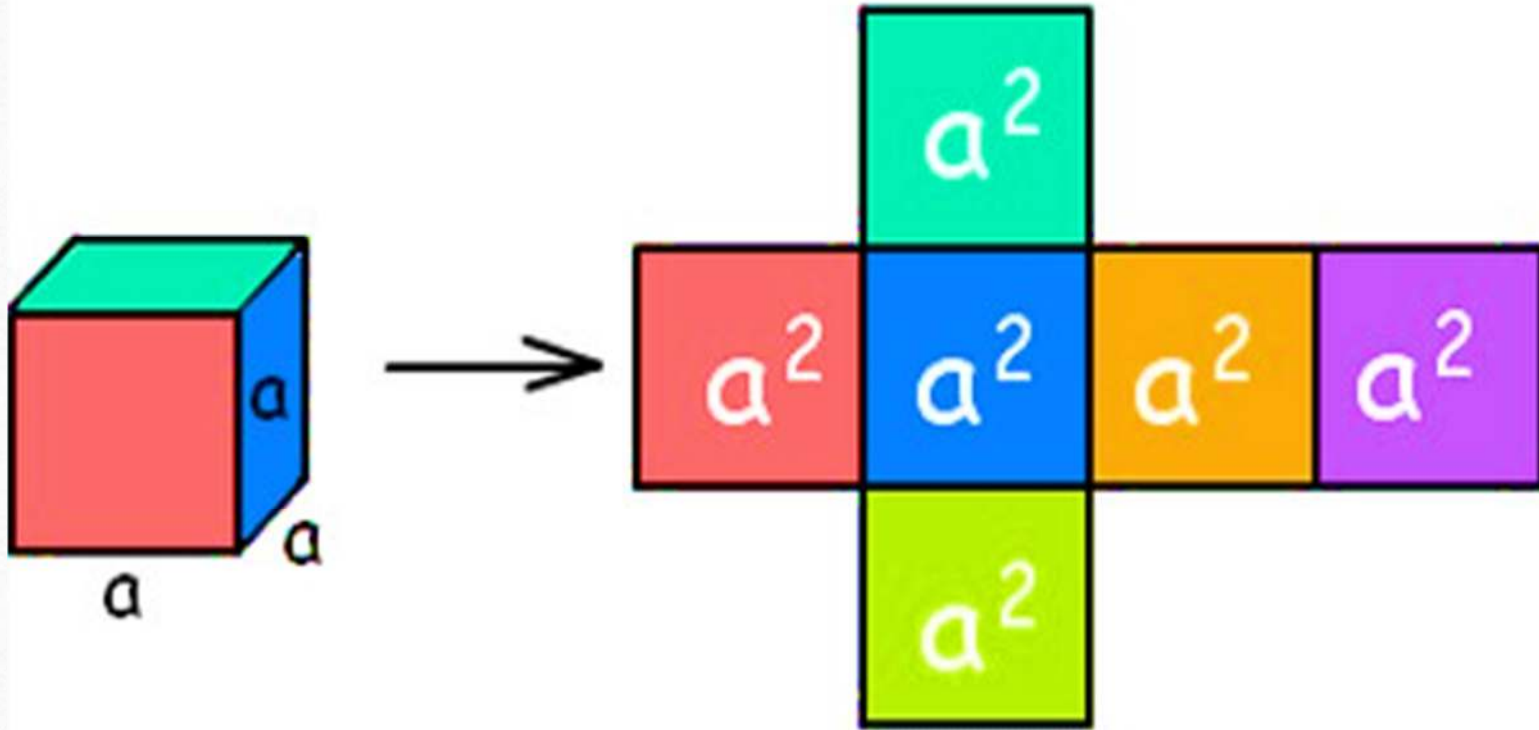


RECTANGLE
 $2 \times \text{Length} \times \text{Width}$

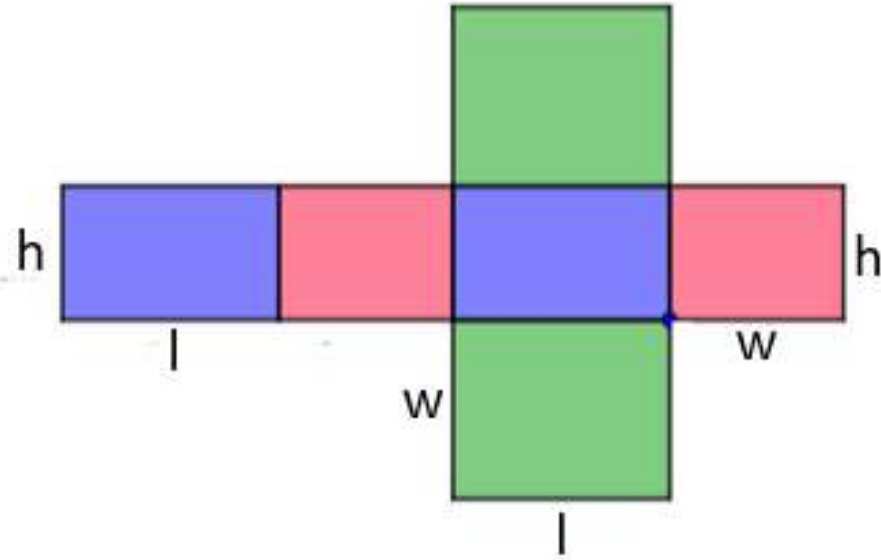
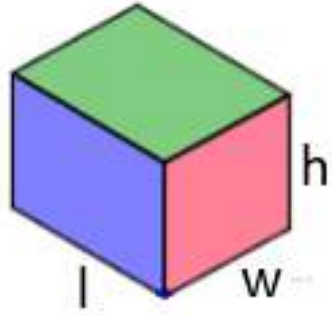


CIRCLE
 $2 \times \text{Radius} \times \pi$

ಘನದ ವಿಸ್ತೀರ್ಣ ತಿಳಿ



ಆಯತ ಘನದ ವಿಸ್ತೀರ್ಣ ತಿಳಿ



ಘನಾಕೃತಿಗಳು



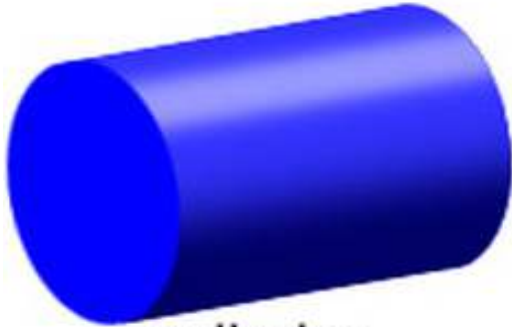
rectangular
prism



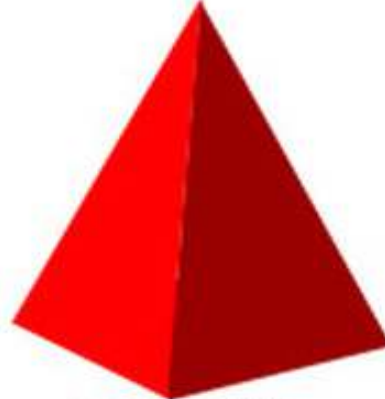
sphere



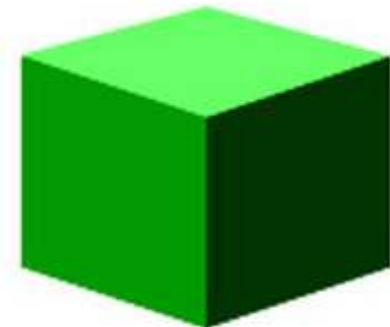
cone



cylinder

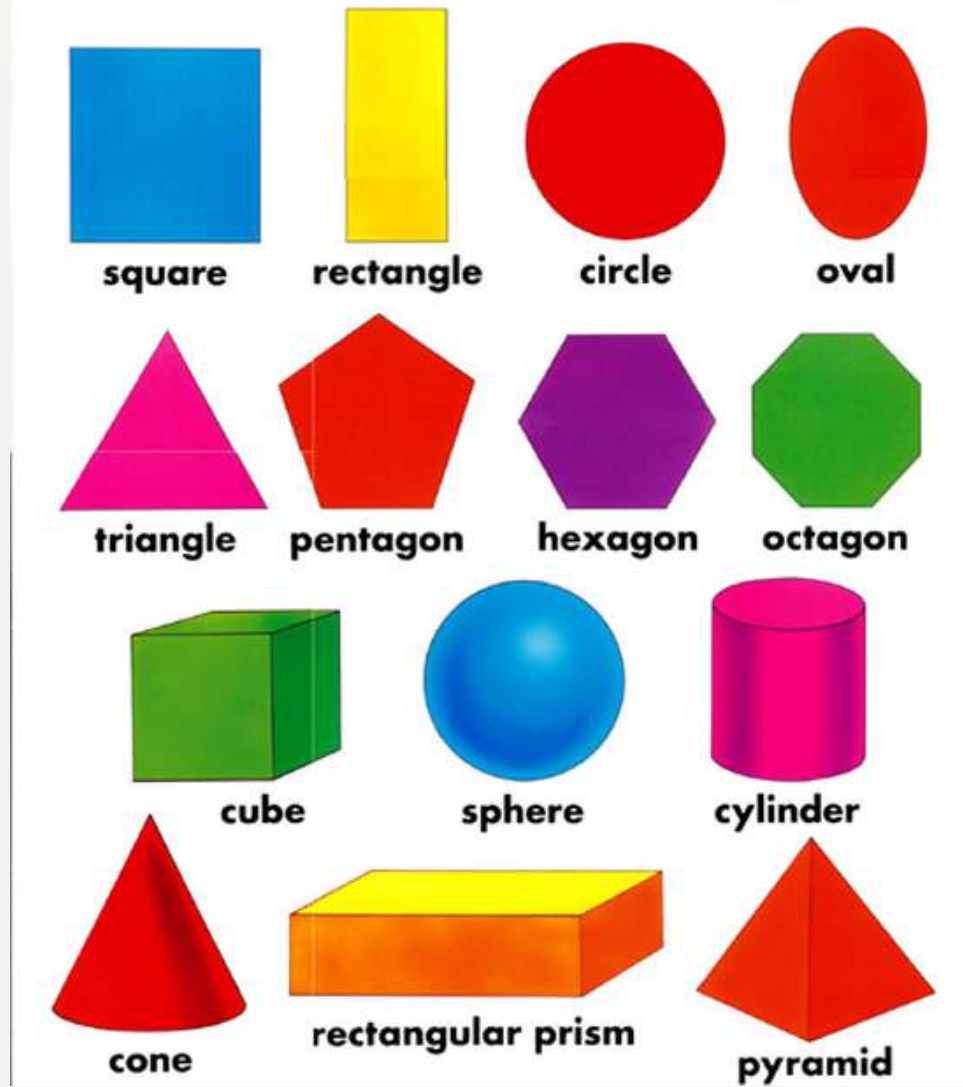


pyramid

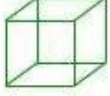
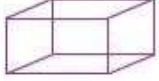

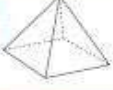

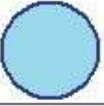

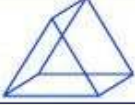


cube

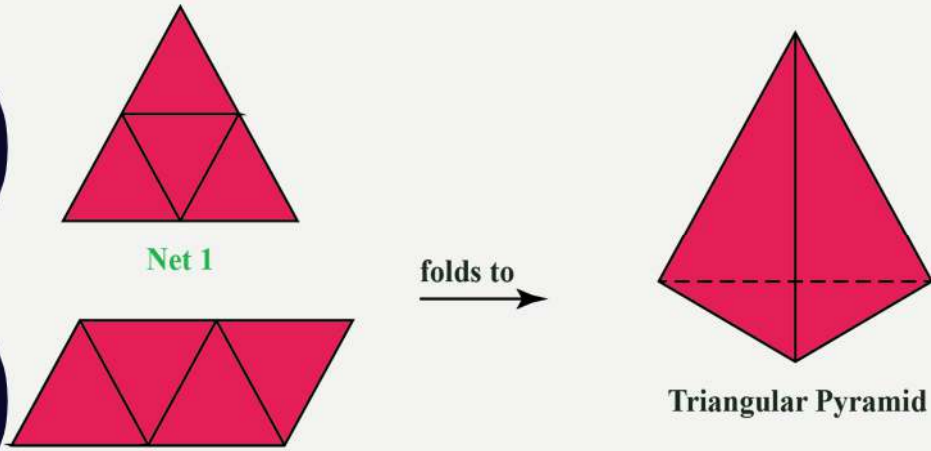
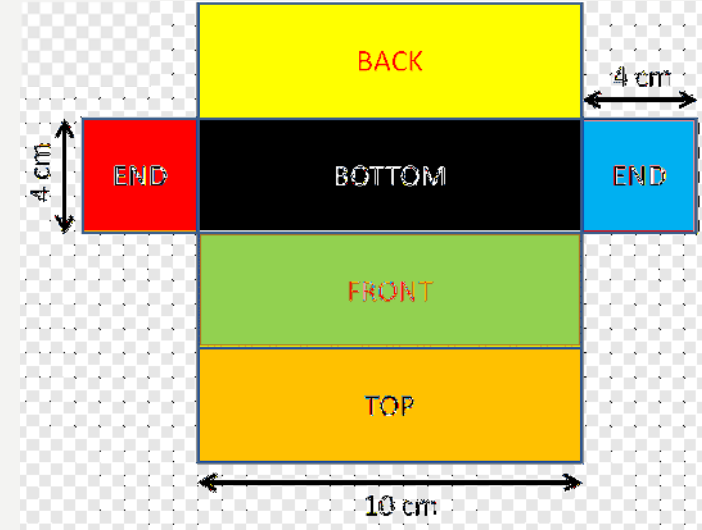
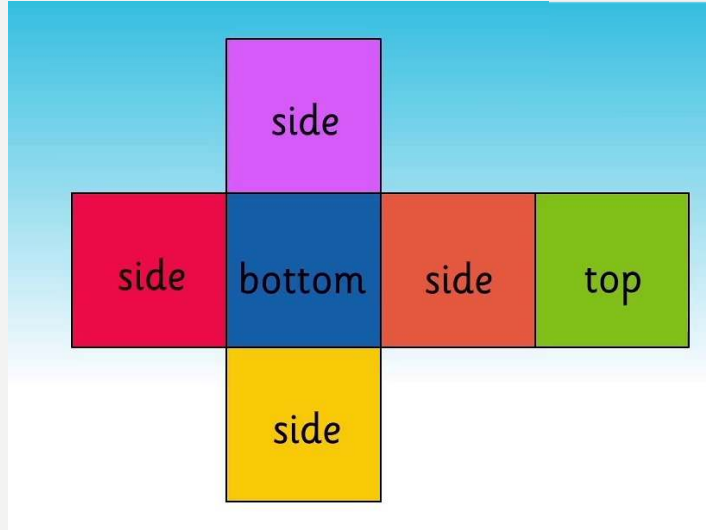
ಸಮತಲಾಕೃತಿ ಮತ್ತು ಘನಾಕೃತಿ



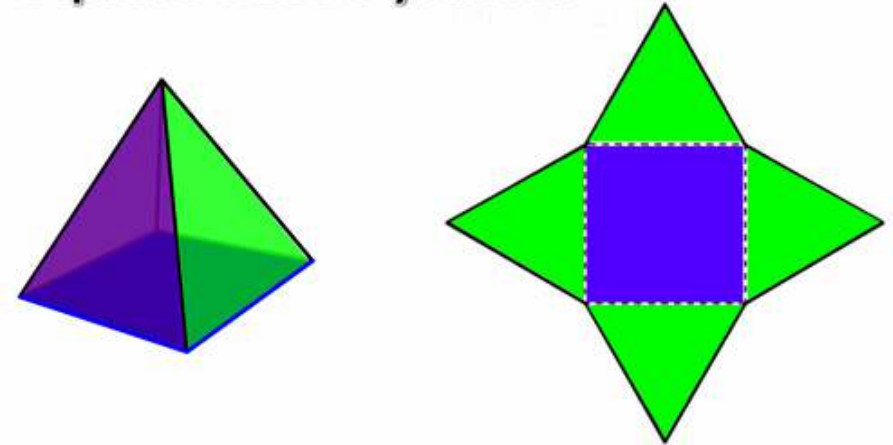
ಘನಾಕೃತಿಗಳ ಆಯಾಮಗಳು

3D shapes	Faces	Edges	Vertices
cube 	6	12	8
cubiod 	6	12	8
cone 	1	0	0
square pyramid 	5	8	5
cylinder 	2	2	2
sphere 	0	0	0
triangular pyramid 	4	6	4
triangular prism 	5	9	6

ಘನಗಳ ಜಾಲ



Square Base Pyramid





Thank You