4. $\frac{x-5}{3}=\frac{x-3}{5}$ **5.** $\frac{3t-2}{4}-\frac{2t+3}{3}=\frac{2}{3}-t$ **6.** $m-\frac{m-1}{2}=1-\frac{m-2}{3}$

Simplify and solve the following linear equations.

7. $3(t-3)=5(2t+1)$ **8.** $15(y-4)-2(y-9)+5(y+6)=0$

$14y$

Example 7: Subtract $3pq\,(p-q)$ from $2pq\,(p+q)$.

(b) Simplify $a(a^2 + a + 1) + 5$ and find its value for (i) $a = 0$, (ii) $a = 1$ (iii) $a = -1$.

$= 3x$

Example 9: Multiply

(i) $(a+7)$ and $(b-5)$

(iv) $(3^{-7} \div 3^{-10}) \times 3^{-5}$ (v) $2^{-3} \times (-7)^{-3}$

(v) $\left\{\left(\frac{-2}{3}\right)^{-2}\right\}^{2}$

7. Suppose 2 kg of sugar contains 9×10^6 crystals.
How many sugar crystals are there in (i) 5 kg of sugar? (ii) 1.2 kg of sugar?

pole which casts a shadow 3 m long.

10. A loaded truck travels 14 km in 25 minutes. If the speed remains the same, how far can it travel in 5 hours?

Example 7: 6 pipes are required to fill a tank in 1 hour 20 minutes. How long will it take if only 5 pipes of the same type are used?

10. Explain how this figure is a trapezium. Which of its two sides are parallel? (Fig 3.26)

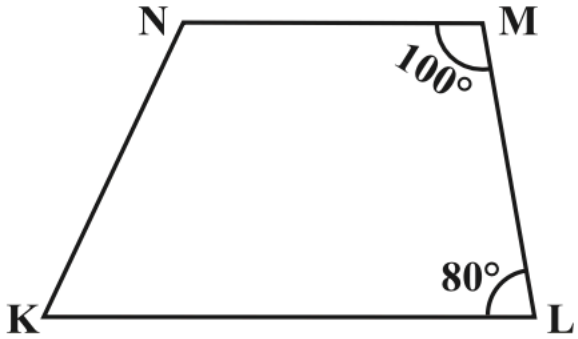


Fig 3.26

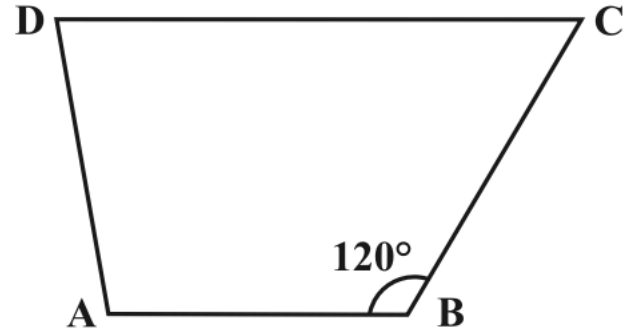


Fig 3.27

11. Find $m\angle C$ in Fig 3.27 if $\overline{AB} \parallel \overline{DC}$.

12. Find the measure of $\angle P$ and $\angle S$ if $\overline{SP} \parallel \overline{RQ}$ in Fig 3.28. (If you find $m\angle R$, is there more than one method to find $m\angle P$?)

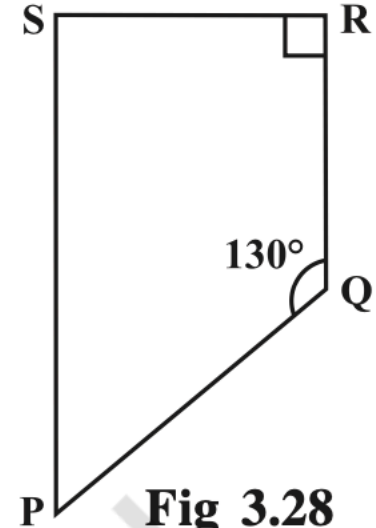


Fig 3.28

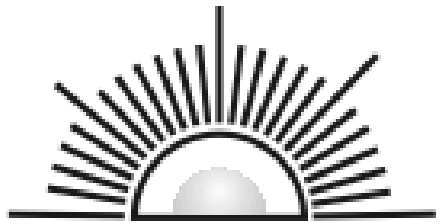
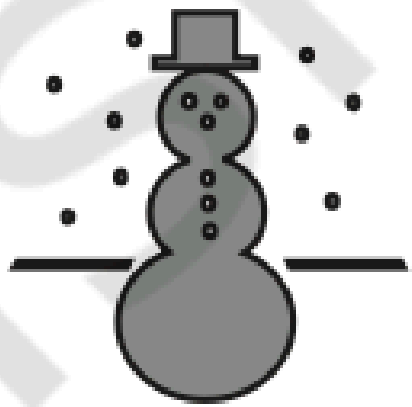
4. Name the quadrilaterals whose diagonals.

(i) bisect each other (ii) are perpendicular bisectors of each other (iii) are equal

(iv) getting a 1-digit number?

5. If you have a spinning wheel with 3 green sectors, 1 blue sector and 1 red sector, what is the probability of getting a green sector? What is the probability of getting a non blue sector?

30%

Season	No. of votes
Summer 	90
Rainy 	120
Winter 	150

2. A group of 360 people were asked to vote for their favourite season from the three seasons rainy, winter and summer.
   (i) Which season got the most votes?
   (ii) Find the central angle of each sector.
   (iii) Draw a pie chart to show this information.