## TRIGONOMETRY

1. Find the values of $a, b, c$ etc.

2. Two observers are at positions A and B.

They each measure the angle of elevation of a 40 metre high chimney.
The angles of elevation are $30^{\circ}$ and $18^{\circ}$ as shown.
Find the distance AB .

3. From the top of a 120 metre high cliff two boats are observed at positions C and D . The angles of depression are $55^{\circ}$ and $20^{\circ}$ as shown.

Find the distance CD.

4. Two observers are at positions E and F.

They each measure the angle of elevation of a 60 metre mast.
The angles of elevation are $38^{\circ}$ and $44^{\circ}$ as shown.
Find the distance EF.


## ANSWERS

| 1. | $\mathrm{a}=9.8$ | $\mathrm{~b}=12.4$ | $\mathrm{c}=11.4$ | $\mathrm{~d}=4.7$ |
| :--- | :--- | :--- | :--- | :--- |
| $\mathrm{f}=10 \cdot 1$ | $\mathrm{~g}=9.4$ | $\mathrm{~h}=6.3$ | $\mathrm{e}=10.9$ |  |
| $\mathrm{k}=8.7$ | $\mathrm{~L}=16.6$ | $\mathrm{~m}=52.1$ | $\mathrm{n}=48.6$ | $\mathrm{o}=25.4$ |
| $\mathrm{p}=56.4$ | $\mathrm{q}=36.9$ | $\mathrm{r}=55.0$ | $\mathrm{~s}=46.1$ | $\mathrm{t}=41.4$ |

2. $A B=53.8 \mathrm{~m}$
3. $\mathrm{CD}=245.7 \mathrm{~m}$
4. $\mathrm{EF}=138.9 \mathrm{~m}$
