## Match-Up

## Trigonometry Worded Problems

A ladder is placed 1.5 m from the foot of a wall. The
1 ladder reaches 3.8 m vertically up the wall. Find the angle between the ground and the ladder in degrees.

A plane-spotter sees a plane in the sky at an angle of
2 elevation of $18^{\circ}$. The plane is a horizontal distance of
40 km from the plane-spotter. Find the vertical height of the plane in kilometres.

| $\mathbf{3}$ | A bird sits on the ground 9 m away from the base of a <br> Christmas tree. The angle of elevation from the bird to <br> the top of the tree is $52^{\circ}$. How tall is the tree in <br> metres? |
| :---: | :---: |
| $\mathbf{4}$ | A ship sails for 150 km on a bearing of $068^{\circ}$. How far <br> North has the ship sailed in kilometres? |
| $\mathbf{5}$ | The angle of depression from the top of a 120 m cliff <br> to a boat in the sea below is $63^{\circ}$. What is the distance <br> in $k m$ from the top of the cliff to the boat? |
| $\mathbf{6}$ | A ladder makes an angle of $75^{\circ}$ with the ground. The <br> distance of the foot of the ladder to the wall is 1.45 m. <br> How long is the ladder in metres? |
| $\mathbf{8}$ | Find the area of this isosceles <br> triangle in $\mathrm{cm}{ }^{2}$. |
| Malia is flying a kite on a 20 m long string. The string <br> is at an angle of $35^{\circ}$ to the horizontal. Malia is holding <br> the kite 1.1 m above the ground. Find the vertical <br> height of the kite above the ground in metres. |  |


| A | 13.0 |
| :---: | :---: |
| B | 134.7 |
| C | 57.6 |
| D | 68.5 |
| E | 12.6 |
| F | 11.5 |
| G | 56.2 |
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| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
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