Finding Upper and Lower Bound

1) 32 cm (correct to the nearest cm) Upper Bound _____ , Lower Bound _____
2)50° (correct to nearest 10°) Upper Bound _____ , Lower Bound _____
3)4.2m (correct to nearest 0.1 m) Upper Bound _____ , Lower Bound _____
4) 958 units (correct to the nearest 100 unit) Upper Bound _____ , Lower Bound _____
5)200 cm (correct to the nearest hundred mm) Upper Bound _____ , Lower Bound _____
6)8 kg (correct to the nearest integer) Upper Bound _____ , Lower Bound _____
7)24.3 seconds (correct to nearest 1 dp) Upper Bound _____ , Lower Bound _____
8) 18.55 liters (correct to nearest 2 dp) Upper Bound _____ , Lower Bound _____
9) 5140 (correct to 3 significant figures) Upper Bound _____ , Lower Bound _____
10) 74 (correct to 2 significant figures) Upper Bound _____ , Lower Bound _____
11) 7.6km (correct to 2 significant figures) Upper Bound _____ , Lower Bound _____
12) 0.23 sec (correct to 2 significant figures) Upper Bound _____ , Lower Bound _____

Answers: 1)32.5, 31.5 2)55° , 45° 3)4.25, 4.15 4)1008, 908 5)205, 195, 6)8.5, 7.5 7)24.35, 24.25 8) 18.555, 18.545 9)5145, 5135 10)74.5, 73.5 11)7.65, 7.55 12)0.235, 0.225

Observations

if $s = a + b$ then
$s_{UB} = a_{UB} + b_{UB}$ &
$s_{LB} = a_{LB} + b_{LB}$

if $d = a - b$ then
$d_{UB} = a_{UB} - b_{LB}$ &
$d_{LB} = a_{LB} - b_{UB}$

Area= Length x Width
$Area_{UB} = Length_{UB} \times Width_{UB}$
$Area_{LB} = Length_{LB} \times Width_{LB}$

Speed = Distance/Time
$Speed_{UB} = Distance_{UB} / Time_{LB}$
$Speed_{LB} = Distance_{LB} / Time_{UB}$

$Length_{UB} = Area_{UB} / Width_{LB}$
$Length_{LB} = Area_{LB} / Width_{UB}$