

Times Table Test

- 1) 3.7×10
- 2) 12.8×5
- 3) $1 \times 1 \times 9 \times 3$
- 4) $3 \times 2 \times 0 \times 50$
- 5) 4.4×7
- 6) $\sqrt{8} \times \sqrt{8} \times 4$
- 7) $0.25 (16 - 44)$
- 8) $-9 \times 0.5 \times 8$
- 9) $\sqrt{0} \times 1 \times 34$
- 10) 126×24

Simplifying Surds

At the top of your page, make a list of the square numbers from one squared to ten squared.



Simplifying Surds

Simplify the following surds...

1) $\sqrt{75}$

2) $\sqrt{128}$

3) $\sqrt{490}$

Practice - Pick 5 questions to answer.

Express each of the following in its simplest form:

(a) $\sqrt{8}$ (b) $\sqrt{12}$ (c) $\sqrt{50}$ (d) $\sqrt{20}$ (e) $\sqrt{24}$ (f) $\sqrt{108}$

(g) $\sqrt{60}$ (h) $\sqrt{72}$ (i) $\sqrt{300}$ (j) $\sqrt{27}$ (k) $\sqrt{96}$ (l) $\sqrt{48}$

(m) $\sqrt{45}$ (n) $\sqrt{98}$ (o) $\sqrt{90}$ (p) $\sqrt{18}$ (q) $\sqrt{28}$ (r) $\sqrt{80}$

(s) $\sqrt{32}$ (t) $\sqrt{160}$ (u) $\sqrt{150}$ (v) $\sqrt{44}$ (w) $\sqrt{63}$ (x) $\sqrt{175}$



Answers

(a)	$2\sqrt{2}$	(b)	$2\sqrt{3}$	(c)	$5\sqrt{2}$	(d)	$2\sqrt{5}$	(e)	$2\sqrt{6}$	(f)	$6\sqrt{3}$
(g)	$2\sqrt{15}$	(h)	$6\sqrt{2}$	(i)	$10\sqrt{3}$	(j)	$3\sqrt{3}$	(k)	$4\sqrt{6}$	(l)	$4\sqrt{3}$
(m)	$3\sqrt{5}$	(n)	$7\sqrt{2}$	(o)	$3\sqrt{10}$	(p)	$3\sqrt{2}$	(q)	$2\sqrt{7}$	(r)	$4\sqrt{5}$
(s)	$4\sqrt{2}$	(t)	$4\sqrt{10}$	(u)	$5\sqrt{6}$	(v)	$2\sqrt{11}$	(w)	$3\sqrt{7}$	(x)	$5\sqrt{7}$

Adding and Subtracting Surds

1) $\sqrt{7} + \sqrt{28}$

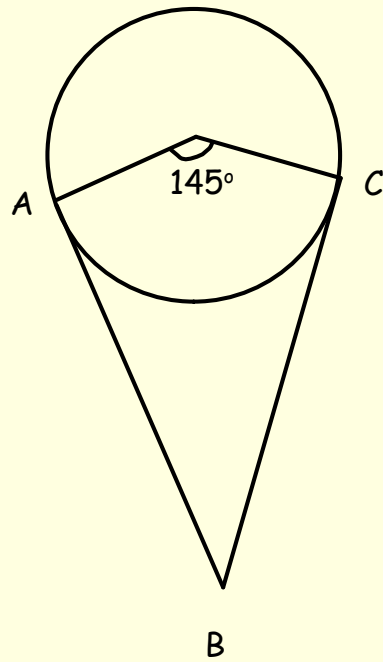
2) $\sqrt{72} - \sqrt{50}$

3) $\sqrt{27} + \sqrt{12}$

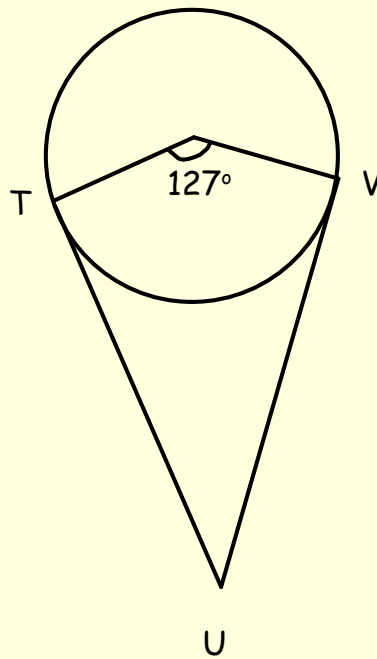
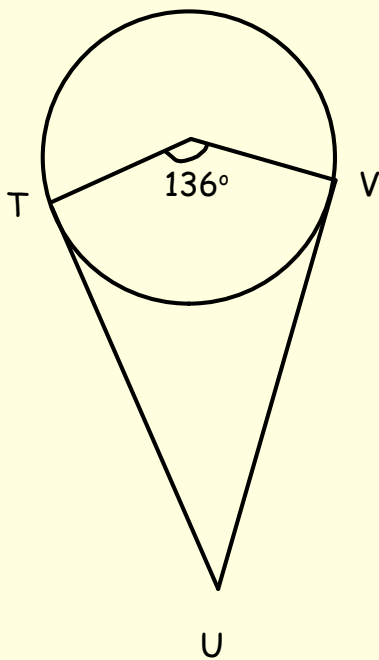


Starter

Find the angle ABC



Find angle TUV in each diagram.



Non-Calculator

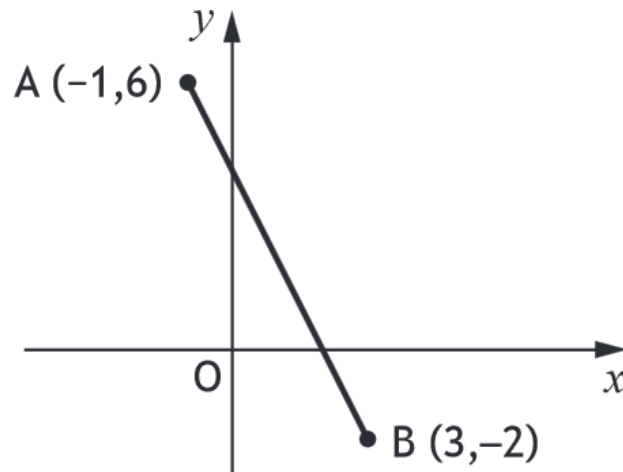
Given that $f(x) = x^2 + 3x$, evaluate $f(-5)$.

2

Expand and simplify $(2x + 3)(x^2 - 4x + 1)$.

3

The diagram below shows the straight line joining points A and B.



Find the equation of the line AB.

Give the equation in its simplest form.

3

Solve, algebraically, the inequality

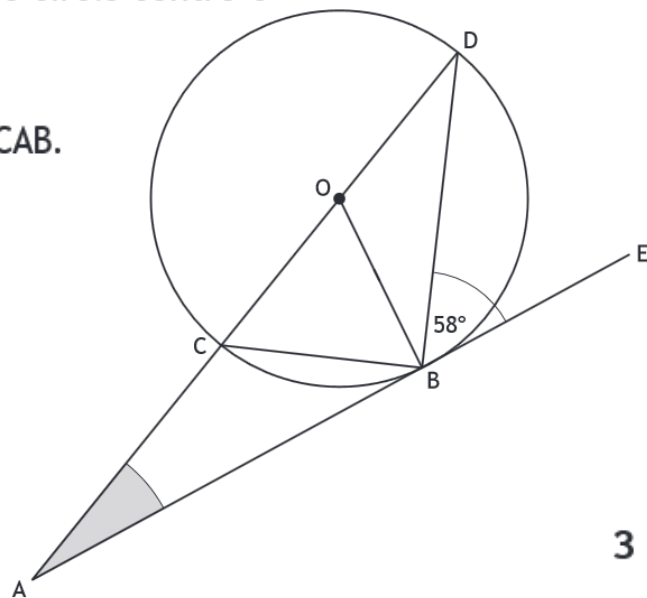
$$19 + x > 15 + 3(x - 2).$$

3

In the diagram shown below:

- ABE is a tangent to the circle centre O
- Angle DBE is 58°

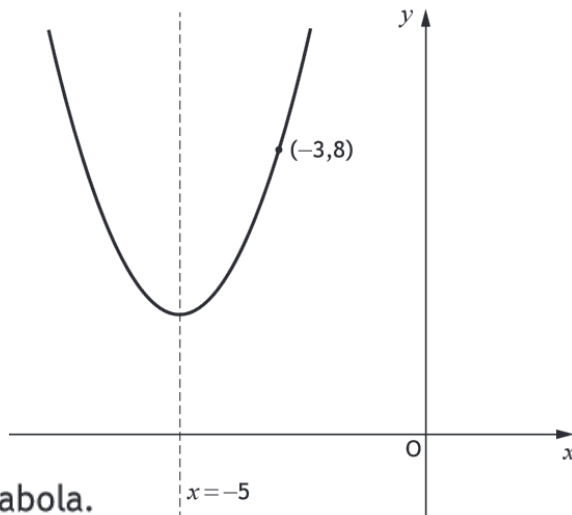
Calculate the size of angle CAB.



3

The graph below shows a parabola with equation of the form $y = (x + a)^2 + b$.

The equation of the axis of symmetry of the parabola is $x = -5$.



(a) State the value of a .

The point $(-3, 8)$ lies on the parabola.

(b) Calculate the value of b .

1
2