

EXERCISE 11.1

1. Fully simplify each of the following expressions, without using a calculator:

a) $\sqrt{36}$

b) $\sqrt{100}$

c) $\sqrt{8}$

d) $\sqrt{12}$

e) $\sqrt{18}$

f) $\sqrt{50}$

g) $\sqrt{5^2 + 12^2}$

h) $\sqrt{10^2 - 8^2}$

i) $\sqrt{13^2 - 5^2}$

j) $\sqrt{20^2 - 12^2}$

k) $\sqrt{9^2 + 12^2}$

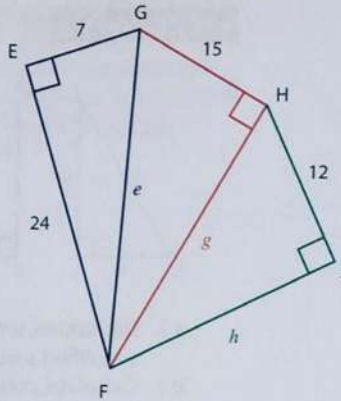
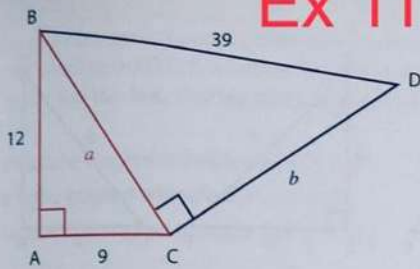
l) $\sqrt{11^2 - 9^2}$

m) $\sqrt{10^2 - 4^2}$

n) $\sqrt{15^2 - 10^2}$

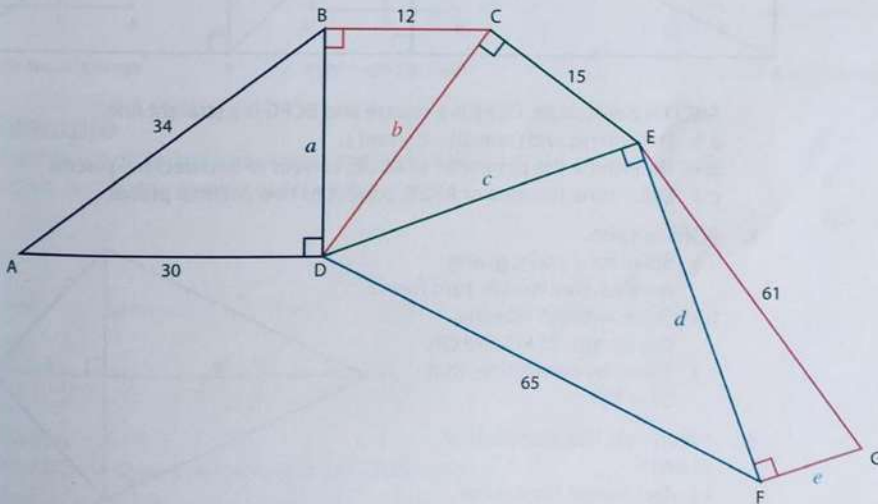
o) $\sqrt{7^2 - 6^2}$

4. **Ex 11.1**



- a) Determine, with reasons, the values of a , b , e , g , and h in the diagrams above.
- b) Showing all necessary calculations, determine:
- the perimeter of quadrilateral ACDB
 - the area of quadrilateral ACDB
 - the perimeter of polygon EFJHG
 - the area of polygon EFJHG.

5.



- a) Show, with reasons, that $a + b + c + d + e = 132$ units in the diagram above.
- b) Showing all necessary calculations, determine:
- the perimeter of polygon ADFGECB
 - the area of polygon ADFGECB.

3. PQRS is a kite.

- a) Solve for x and y , giving reasons. (Answers in surd form.)
- b) State, without reasons, the lengths of PQ and QR.
- c) Show, by calculation, that $ST = TQ$.

Ex 11.2

