

Similar Triangles – Answers

Similar Triangles

- | | |
|----------------------------|-------------------------|
| 1) BC = 16.5cm | DE = 6cm |
| 2) AB = $10\frac{2}{3}$ cm | DF = 10.5cm |
| 3) BC = 12.5cm | DF = 9.6cm |
| 4) AB = 11.25cm | DF = $10\frac{2}{3}$ cm |
| 5) BC = $13\frac{1}{3}$ cm | DE = 7.5cm |

Similar Triangles 1

- | | |
|---------------------------|--|
| 1) QR = 7.5cm | |
| 2) XZ = 4cm | YZ = $10\frac{2}{3}$ cm |
| 3) BC = 9cm | XZ = $9\frac{1}{3}$ cm |
| 4) PQ = 10cm | QR = $13\frac{1}{3}$ cm |
| 5) EF = $6\frac{2}{3}$ cm | DF = $17\frac{1}{3}$ cm (this part needs Pythagoras) |
| 6) SU = $6\frac{2}{3}$ cm | |

Similar Triangles 2

- (a) $\angle BAC = \angle DEC$ and $\angle ABC = \angle EDC$ (alternate angles in parallel lines)
So triangles BAC and DEC are similar.
(b) AC = 4.5cm
(c) BC = 3cm
- (a) $\angle PQR = \angle PST$ and $\angle PRQ = \angle PTS$ (corresponding angles in parallel lines)
So triangles PQR and PST are similar.
(b) ST = $8\frac{1}{3}$ cm
(c) RT = 3cm
- (a) BC = $2\frac{2}{3}$ cm
(b) AB = 8.41cm (this part needs Pythagoras)
- (a) Let $\angle BAC$ be y . Then both $\angle ABC$ and $\angle DAC$ are $90-y$.
So both triangles have angles of 90° , y and $90-y$.
(b) AC = 12cm

Similar Triangles – Further Problems

- (a) $\angle PQR = \angle PST$ and $\angle PRQ = \angle PTS$ (corresponding angles in parallel lines)
So triangles PQR and PST are similar.
(b) $x = 5$ cm
- AC = 8.8cm CE = 3.2cm
- (See Similar Triangles 2 Question 4)