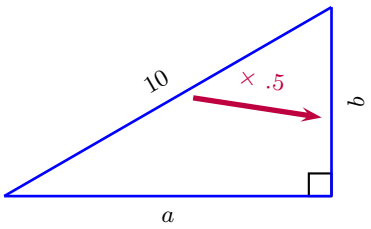
1. Solve the sides of the following triangle.



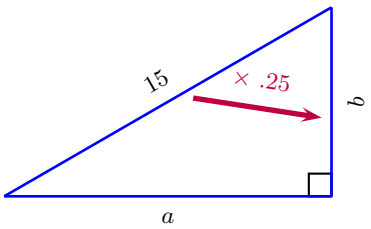
Solution: where appropriate solutions may have been approximated..

$$\begin{aligned} b &= (10)(.5) && \text{(given)} \\ &= 5 \end{aligned}$$

Then we use pythagoras;

$$\begin{aligned} (a)^2 + (5)^2 &= (10)^2 && \text{(pythagoras)} \\ (a)^2 &= (10)^2 - (5)^2 && \text{(algebra)} \\ (a)^2 &= 75 && \text{(algebra)} \\ a &\approx 8.66 && \text{(approx. if needed)} \end{aligned}$$

2. Solve the sides of the following triangle.



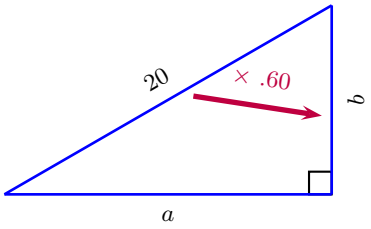
Solution: where appropriate solutions may have been approximated..

$$\begin{aligned} b &= (15)(.25) && \text{(given)} \\ &= 3.75 \end{aligned}$$

Then we use pythagoras;

$$\begin{aligned} (a)^2 + (3.75)^2 &= (15)^2 && \text{(pythagoras)} \\ (a)^2 &= (15)^2 - (3.75)^2 && \text{(algebra)} \\ (a)^2 &= 210.938 && \text{(algebra)} \\ a &\approx 14.524 && \text{(approx. if needed)} \end{aligned}$$

3. Solve the sides of the following triangle.



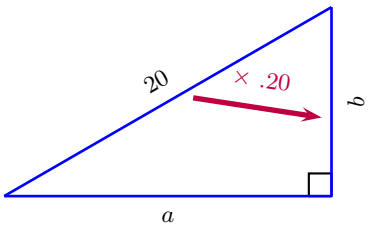
Solution: where appropriate solutions may have been approximated..

$$\begin{aligned} b &= (20)(.60) && \text{(given)} \\ &= 12 \end{aligned}$$

Then we use pythagoras;

$$\begin{aligned} (a)^2 + (12)^2 &= (20)^2 && \text{(pythagoras)} \\ (a)^2 &= (20)^2 - (12)^2 && \text{(algebra)} \\ (a)^2 &= 256 && \text{(algebra)} \\ a &\approx 16 && \text{(approx. if needed)} \end{aligned}$$

4. Solve the sides of the following triangle.



Solution: where appropriate solutions may have been approximated..

$$\begin{aligned} c &= (10) \div (.20) && \text{(given)} \\ &= 50 \end{aligned}$$

Then we use pythagoras;

$$\begin{aligned} (a)^2 + (10)^2 &= (50)^2 && \text{(pythagoras)} \\ (a)^2 &= (50)^2 - (10)^2 && \text{(algebra)} \\ (a)^2 &= 2400 && \text{(algebra)} \\ a &\approx 48.99 && \text{(approx. if needed)} \end{aligned}$$

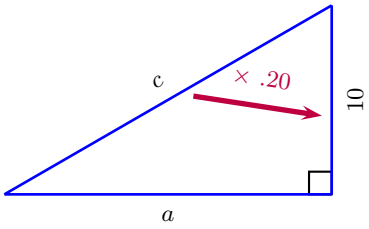
Solution: where appropriate solutions may have been approximated..

$$\begin{aligned} b &= (20)(.20) && \text{(given)} \\ &= 4 \end{aligned}$$

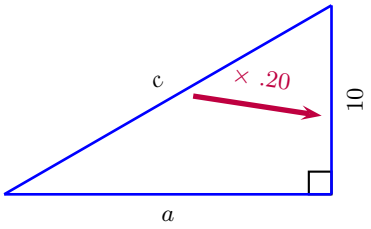
Then we use pythagoras;

$$\begin{aligned} (a)^2 + (4)^2 &= (20)^2 && \text{(pythagoras)} \\ (a)^2 &= (20)^2 - (4)^2 && \text{(algebra)} \\ (a)^2 &= 384 && \text{(algebra)} \\ a &\approx 19.596 && \text{(approx. if needed)} \end{aligned}$$

6. Solve the sides of the following triangle.



5. Solve the sides of the following triangle.



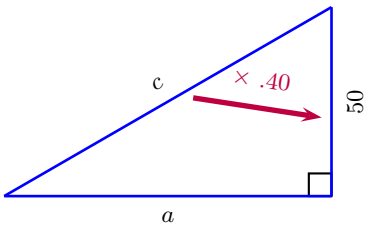
Solution: where appropriate solutions may have been approximated..

$$\begin{aligned} c &= (10) \div (.20) && \text{(given)} \\ &= 50 \end{aligned}$$

Then we use pythagoras;

$$\begin{aligned} (a)^2 + (10)^2 &= (50)^2 && \text{(pythagoras)} \\ (a)^2 &= (50)^2 - (10)^2 && \text{(algebra)} \\ (a)^2 &= 2400 && \text{(algebra)} \\ a &\approx 48.99 && \text{(approx. if needed)} \end{aligned}$$

7. Solve the sides of the following triangle.



Solution: where appropriate solutions may have been approximated..

$$\begin{aligned} c &= (8) \div (.80) && \text{(given)} \\ &= 10 \end{aligned}$$

Then we use pythagoras;

$$\begin{aligned} (a)^2 + (8)^2 &= (10)^2 && \text{(pythagoras)} \\ (a)^2 &= (10)^2 - (8)^2 && \text{(algebra)} \\ (a)^2 &= 36 && \text{(algebra)} \\ a &\approx 6 && \text{(approx. if needed)} \end{aligned}$$

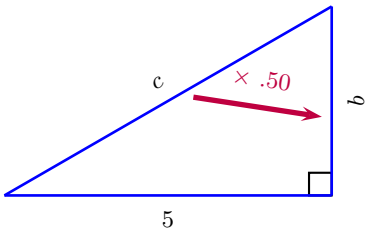
Solution: where appropriate solutions may have been approximated..

$$\begin{aligned} c &= (50) \div (.40) && \text{(given)} \\ &= 125 \end{aligned}$$

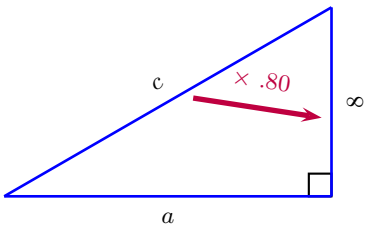
Then we use pythagoras;

$$\begin{aligned} (a)^2 + (50)^2 &= (125)^2 && \text{(pythagoras)} \\ (a)^2 &= (125)^2 - (50)^2 && \text{(algebra)} \\ (a)^2 &= 13125 && \text{(algebra)} \\ a &\approx 114.564 && \text{(approx. if needed)} \end{aligned}$$

9. Solve the sides of the following triangle.



8. Solve the sides of the following triangle.



Solution: where appropriate solutions may have been approximated..

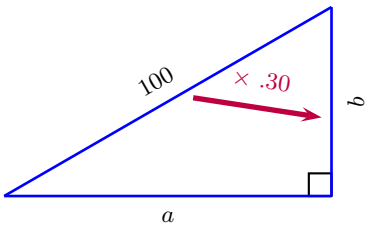
$$\begin{aligned} b &= (c)(.50) && \text{(given)} \\ &= .50c \end{aligned}$$

Then we use pythagoras;

$$\begin{aligned} (5)^2 + (.50c)^2 &= (c)^2 && \text{(pythagoras)} \\ (5)^2 + 0.25c^2 &= (c)^2 && \text{(algebra)} \\ (5)^2 &= (c)^2 - 0.25c^2 && \text{(algebra)} \\ (5)^2 &= 0.75c^2 && \text{(algebra)} \\ \frac{(5)^2}{0.75} &= c^2 && \text{(algebra)} \\ \frac{25}{0.75} &= c^2 && \text{(algebra)} \\ \pm\sqrt{\frac{25}{0.75}} &= c && \text{(algebra)} \\ 5.774 &= c && \text{(approx if needed)} \end{aligned}$$

then, finally, to find side b just multiply $b = 5.774(.50)$

10. Solve the sides of the following triangle.



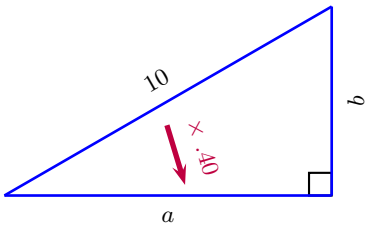
Solution: where appropriate solutions may have been approximated..

$$\begin{aligned} b &= (100)(.30) && \text{(given)} \\ &= 30 \end{aligned}$$

Then we use pythagoras;

$$\begin{aligned} (a)^2 + (30)^2 &= (100)^2 && \text{(pythagoras)} \\ (a)^2 &= (100)^2 - (30)^2 && \text{(algebra)} \\ (a)^2 &= 9100 && \text{(algebra)} \\ a &\approx 95.394 && \text{(approx. if needed)} \end{aligned}$$

11. Solve the sides of the following triangle.



Solution: where appropriate solutions may have been approximated..