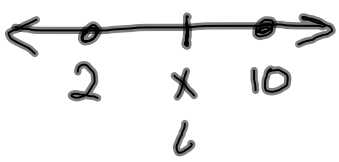


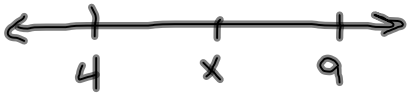
6

Arithmetic mean Subtraction

$x - 2 = 10 - x$

$2x - 2 = 10$

$\frac{2x}{2} = \frac{10+2}{2}$



6

Geometric mean Division

$\frac{x}{4} = \frac{9}{x}$

$x \cdot x = 4 \cdot 9$

$x^2 = 4 \cdot 9$

$\sqrt{x^2} = \sqrt{4 \cdot 9}$

$x = \sqrt{4 \cdot 9}$

$x = \sqrt{36}$

$x = 6$

Feb 22-10:09 AM

1) GM of 8 and 18

$\sqrt{8 \cdot 18}$

$\sqrt{144}$

12

2) GM 9, 80

$\sqrt{9 \cdot 80}$

$\sqrt{9}\sqrt{80}$

$3\sqrt{80}$

$3\sqrt{4}\sqrt{20}$

$6\sqrt{20}$

$6\sqrt{4}\sqrt{5}$

$12\sqrt{5}$

Feb 22-10:20 AM

3) a

$\sqrt{75}$

$\sqrt{3}\sqrt{25}$

$\sqrt{3} \cdot 5$

$5\sqrt{3}$

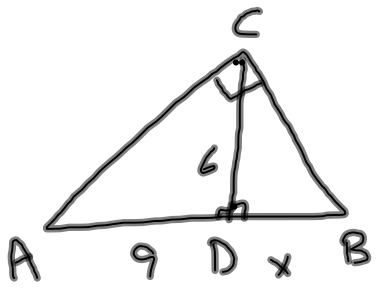
b

$\frac{2}{\sqrt{3}} \cdot \left(\frac{\sqrt{3}}{\sqrt{3}}\right)$

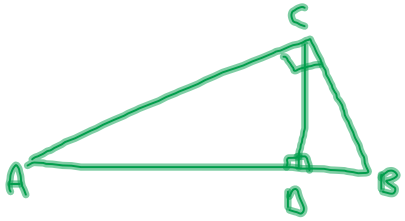
$\frac{2\sqrt{3}}{3}$

Feb 22-10:25 AM

4) $\triangle ADC \sim \triangle CDB \sim \triangle ACB$



5) CD is G.M. of DA & DB



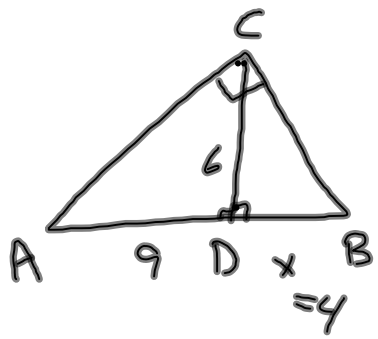
6) CB is G.M. of BD & BA

7)

Feb 22-10:28 AM

7) 6 is G.M.

of x & 9



$$\frac{6}{x} = \frac{9}{6}$$

$$6 \cdot 6 = 9 \cdot x$$

$$\frac{36}{9} = \frac{9x}{9}$$

$$x = 4$$

Feb 22-10:37 AM

8) 2, 7, 10

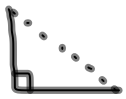
Since $2+7 \not> 10$ not a triangle

9) 6, 6, 2

$2^2 + 6^2 \; ? \; 6^2$

$4 + 36 \quad 36$

$40 > 36$



Acute since hypotenuse squared was too small

Feb 22-10:40 AM

10) 5, 12, 13

$5^2 + 12^2 \stackrel{?}{=} 13^2$

$25 + 144 \stackrel{?}{=} 169$

$169 = 169$

right

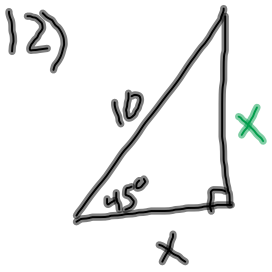
11) 5, 8, 15

Since $5+8 \not> 15$

impossible

Feb 22-10:44 AM

12)



$\frac{10}{x} = \frac{\sqrt{2}}{1}$

$x^2 + x^2 = 10^2$

$2x^2 = 100$

$\sqrt{x^2} = \sqrt{50}$

$x = \sqrt{50}$

$x = \sqrt{25}\sqrt{2}$

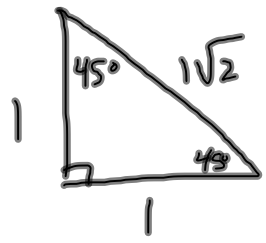
$x = 5\sqrt{2}$

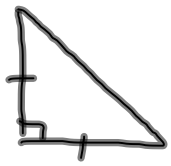
$10 = x \cdot \sqrt{2}$

$\frac{10}{\sqrt{2}} = x$

$x = \frac{10}{\sqrt{2}}\left(\frac{\sqrt{2}}{\sqrt{2}}\right)$

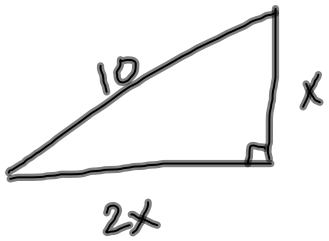
$x = \frac{10\sqrt{2}}{2} = 5\sqrt{2}$





Feb 22-10:48 AM

13)



$(x)^2 + (2x)^2 = (10)^2$

$x^2 + 4x^2 = 100$

$5x^2 = 100$

$x^2 = 20$

$\sqrt{x^2} = \sqrt{20}$

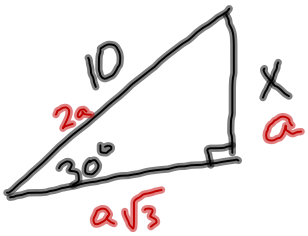
$x = \sqrt{20}$

$x = \sqrt{4}\sqrt{5}$

$x = 2\sqrt{5}$

Feb 23-10:07 AM

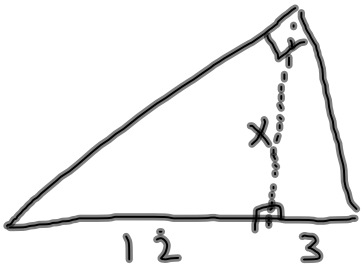
14)



$x = 5$

Feb 23-10:13 AM

15)



X is G.M. of 3 and 12

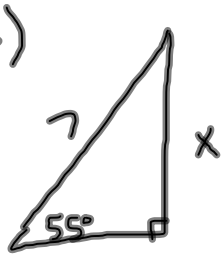
$\sqrt{(3)(12)}$

$\sqrt{36}$

6

Feb 23-10:16 AM

16)



SOHCAHTOA

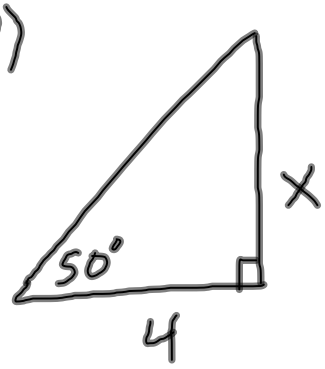
$\sin 55° = \frac{x}{7}$

$7(.819) = \left(\frac{x}{7}\right)7$

$5.73 = x$

Feb 23-10:20 AM

17)



SOHCAHTOA

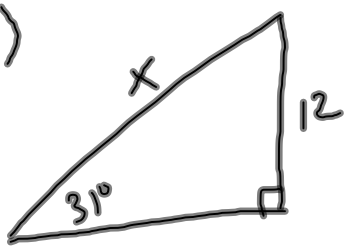
$\tan 50^\circ = \frac{X}{4}$

$4(1.19) = \left(\frac{X}{4}\right)4$

$X = 4.76$

Feb 23-10:25 AM

18)



SOHCAHTOA

$\sin 31^\circ = \frac{12}{x}$

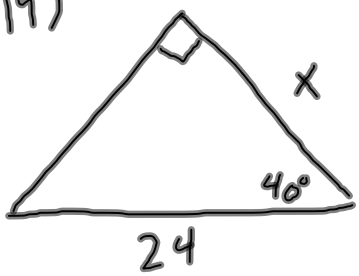
$x(.52) = \left(\frac{12}{x}\right)x$

$\frac{.52x}{.52} = \frac{12}{.52}$

$X = 23$

Feb 23-10:27 AM

19)



SOH CAH TOA

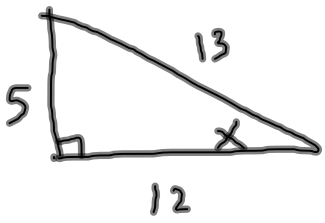
$\cos 40^\circ = \frac{x}{24}$

$24(.77) = \left(\frac{x}{24}\right)24$

$18.\overline{11} = x$

Feb 23-10:31 AM

20)



SOA CAH TOA

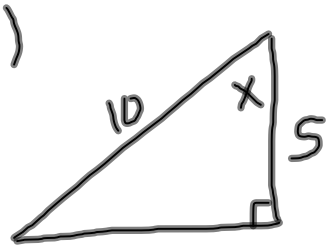
$\sin x = \frac{5}{13}$

$\sin x = .38 \quad x = 22.3$

2nd | sin | .38 | =

Feb 23-10:37 AM

21)



SOH CAH TOA

$\cos x = \frac{5}{10}$ (or .5)

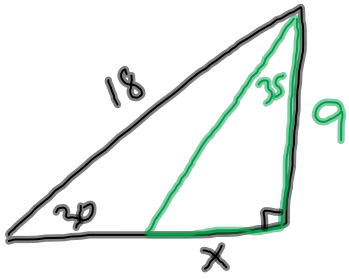
$\cos x = .5$

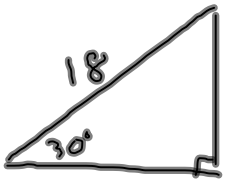
2nd cos .5 = $= 60°$

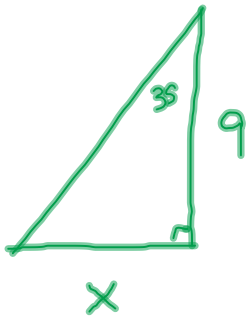
$\frac{8 \div 2}{10 \div 2} = \frac{4}{5}$

Feb 23-10:43 AM

22)







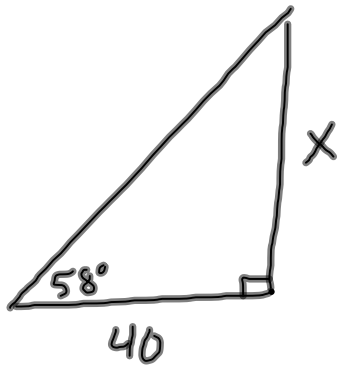
$\tan 35° = \frac{x}{9}$

$9(.7) = \left(\frac{x}{9}\right)9$

$6.3 = x$

Feb 23-10:48 AM

23)



$\tan 58° = \frac{x}{40}$

$40(1.6) = \frac{x}{40}(40)$

$64 = x$

Feb 23-10:52 AM