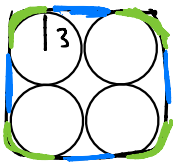
Grading

1-22-22

Math E 23 December 2021

52)



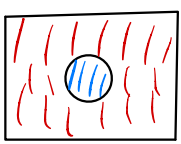
$C = 2\pi r = 6\pi$

$4 \cdot d = 4 \cdot 6$

1) Small components

2) As long as you know the concept, problem is solvable.

55) complement →



Red = complement

Shaded = whole triangle − unshaded

$= 40$

unshaded = 28 squares

Shaded = 12

$\frac{12}{28} = \frac{3}{7}$

$\frac{12}{40}$

54) $\log_x 8 = y$ log form $y = ?$

$x^y = 8$

(?) result

exponential form

$\log_2 8 = y \rightarrow 2^y = 8 \Rightarrow y = 3$

base (?) power

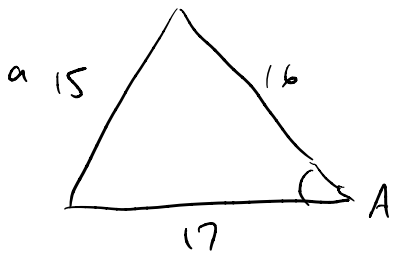
base result power

58) Law of cosines

$c^2 = a^2 + b^2 - 2ab\cos C$

$a^2 = b^2 + c^2 - 2bc\cos A$

$15^2 = \ldots\ldots\ldots\cos A$



$\cos(90°)$

$\cos\left(\frac{\pi}{2}\right)$

60) 16 cars, 6 minivans, 7 sedans, 3 hatchbacks

She chooses 3, P(ξ rents 1 of each type $\S$)

Assuming we choose sequentially (ordered)

She already picked MV

P(ξ she also chooses sedan and then hatchback $\S$)

$\frac{7}{15} \cdot \frac{3}{14}$ $\quad \underline{3} \quad \underline{2} \quad \underline{1} = 3!$

Show example

P((MV, S, HB))

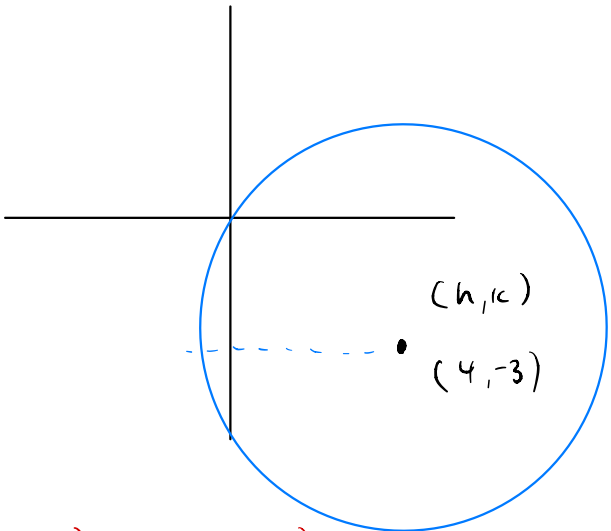
S, HB, MV

$\frac{6}{16} \cdot \frac{7}{15} \cdot \frac{3}{14} \cdot 3!$ $\quad \frac{7}{16} \cdot \frac{3}{15} \cdot \frac{6}{14}$

$= .225 = 9/40$ ✓

30)

Circle equation

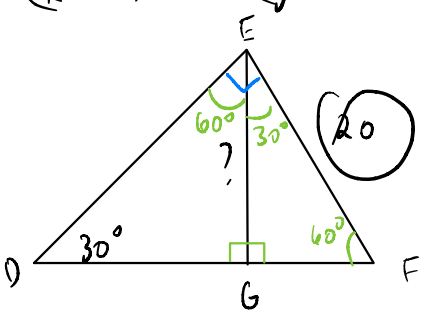


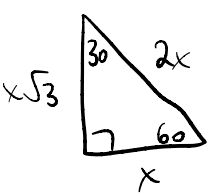
$$(x-h)^{2} + (y-k)^{2} = r^{2}$$

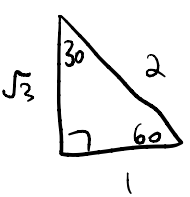
(1) (1) (2)

Geometry

37)







$10\sqrt{3}$

Geometry

1) When in doubt, just start filling in angles and sides

2) Estimate

34) $x \cdot 1.06 \cdot .94 =$ (6% tax, un-sales tax)

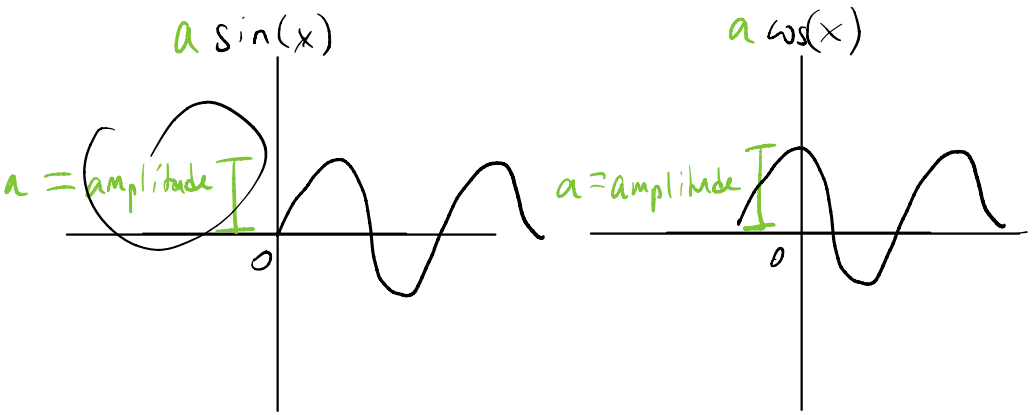
$1.06x = 18.55$, x is price before tax

$x = 18.55 / 1.06 = 17.5$

$17.5 - 2 - 6 - 3 - 4 = \boxed{2.5}$

Sine graph amplitude

44) G 3



general $y = a \sin(bx + c) + d$ 4 parameters

$= a \sin(b(x + \frac{c}{b})) + d$

protractor

39) $A = 36^\circ$

$C = 90^\circ - 36^\circ = 54^\circ$