

Review #9

① $e^{2x} - 5e^x + 6 = 0$

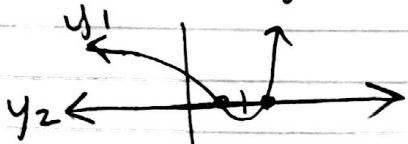
y_1 | y_2

$(e^x - 3)(e^x - 2) = 0$

$e^x = 3$ $e^x = 2$

$\ln 3 = x$ $\ln 2 = x$

1.0986 .693



$x = .693 \text{ \& } 1.0986$

② $4(2)^{cx} = 20$

$2^{cx} = \frac{5}{2}$

$\log_2 5 = cx$

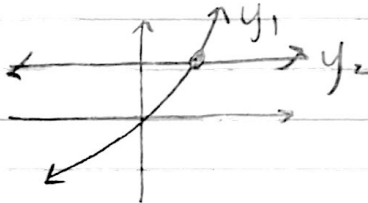
$\frac{2.322}{c} = x$

$x = \frac{2.322}{c}$

$\log_2 5 = \frac{\log 5}{\log 2}$

③ $e^{2x} + 3x = 15$

y_1 | y_2

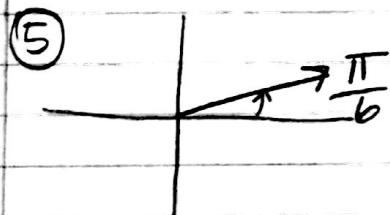


$x = 1.21$

④ Arc Length (means circumference)

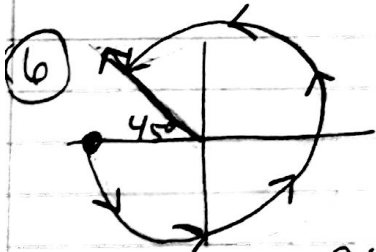
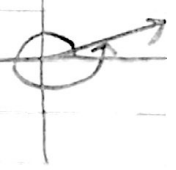
$(\frac{\theta}{2\pi}) 2\pi r$

$(\frac{\theta}{2\pi}) 2\pi (4) = 13 \rightarrow \frac{\theta}{4} = \frac{13}{4} \rightarrow \theta = \frac{13}{4}$

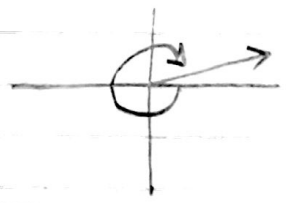


$\frac{\pi}{6} + 2\pi = \frac{\pi}{6} + \frac{12\pi}{6} = \frac{13\pi}{6}$

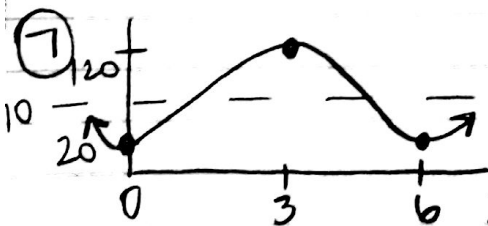
$\frac{\pi}{6} - 2\pi = \frac{\pi}{6} - \frac{12\pi}{6} = \frac{-11\pi}{6}$



$\frac{7\pi}{4} \times 180 = 315^\circ$



Stopped at $135^\circ \rightarrow \frac{3\pi}{4}$

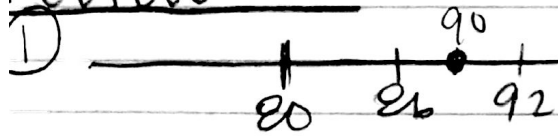


$-50 \cos \frac{\pi}{3} \theta + 70$

period $\frac{2\pi}{6} = \frac{\pi}{3}$

add midline

Review #10



$$\bar{x} = 80 \quad s_x = 6$$

$$z = \frac{x - \bar{x}}{s_x} = \frac{90 - 80}{6} = \boxed{1.67}$$

② **III** Everyone has an equal chance of being selected - completely random
 I, II & **IV** all contain some sort of bias

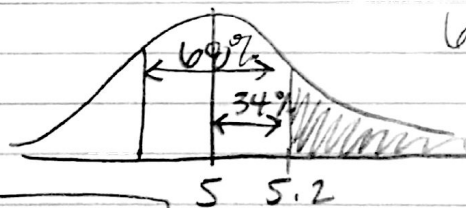
③ Sample survey - (can actually question students) if you have an idea of a small group, then you can make an estimation of the population

④

$$\bar{x} = 5 \text{ ml} \quad s_x = .2 \text{ ml}$$

$$100 - 34 = 66\%$$

$$500(.66) = \boxed{330 \text{ cans}}$$



68% - 95% - 99.7%

Review #11

① $AD \cong CD$

② $\angle 3 \cong \angle 4$

③ $\angle 1 + \angle 3 = 180$

$\angle 4 + \angle 2 = 180$

④ $\angle 1 + \angle 3 = \angle 2 + \angle 4$

⑤ $\angle 1 = \angle 2$

⑥ $DB \cong DB$

⑦ $\triangle ADB \cong \triangle CDB$

⑧ $\angle 5 \cong \angle 6$

⑨ DB bisects $\angle ABC$

① given

② given

③ Linear

pair postulate

④ substitution

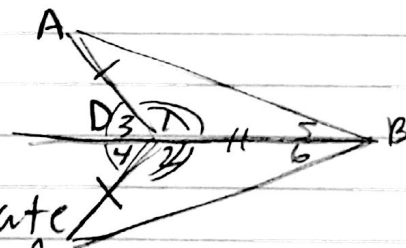
⑤ subtraction

⑥ reflexive

⑦ SAS

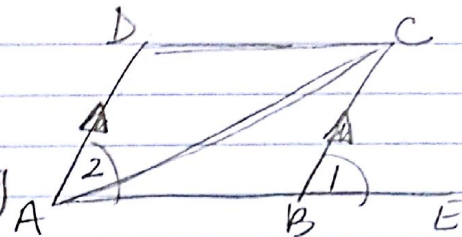
⑧ CPCTC

⑨ def. of bisector



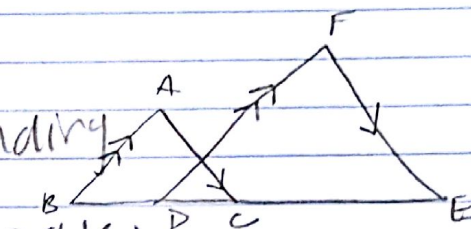
- ②
- ① ABCD is \square
 - ② AD \parallel CB
 - ③ $\angle DAB \cong \angle CBE$
 - ④ $\angle 2 + \angle CAB = \angle 1$
 - ⑤ $m\angle 1 > m\angle 2$

- ① given
- ② def. of \square
- ③ corresponding angles
- ④ addition postulate
- ⑤



- ③
- ① $ab \parallel df$ & $ac \parallel fe$
 - ② $\angle abc \cong \angle fde$
 - ③ $\angle acb \cong \angle fed$
 - ④ $\triangle abc \cong \triangle fde$

- ① given
- ② corresponding angles
- ③ corr. angles
- ④ AA



Review #12

Ratio!
Similar
Shapes

① $\frac{60}{56} \times \frac{x}{5}$ diameter of little cone

$$\frac{300}{56} = \frac{56x}{56}$$

X = 5.4cm

② $\frac{28 + 7 + x + 8}{15} = \frac{7 + x + 8}{8}$

$$\frac{43 + x}{15} \times \frac{15 + x}{8}$$

$$344 + 8x = 225 + 15x$$

$$-225 - 8x \quad -225 - 8x$$

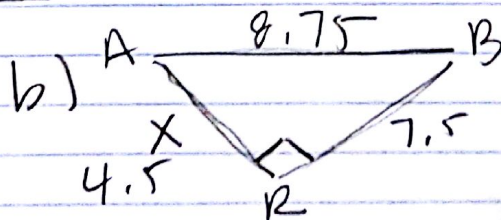
$$\frac{119}{7} = \frac{7x}{7}$$

X = 17

③ a) $\frac{1.4}{1.2} \times \frac{x}{7.5}$

$$\frac{10.5}{1.2} = \frac{1.2x}{1.2}$$

X = 8.75mi



$$x^2 + 7.5^2 = 8.75^2$$

$$x^2 + 56.25 = 76.5625$$

$$x^2 = 20.3125$$

$$x = 4.5$$

4.5 + 7.5 = 12mi