9.1.1

Hw<

9-10)

a) diameter is 1 cm

$C = \pi d$

$C = 3.14 \cdot 1$

$C = 3.14$ or π

b) diameter is 7.2 meters

$C = \pi \cdot d$

$C = 3.14 \cdot 7.2$

$C = 22.6$ m

c) circumference is 1 mile. Diameter = ?

$C = \pi \cdot d$

$\frac{1}{\pi} = \frac{\pi d}{\pi}$

$0.318 = d$

approx $\frac{1}{3}$ mile (rounded)

d) circumference is 12 miles. Diameter = ?

$C = \pi d$

$\frac{12}{\pi} = \frac{\pi d}{\pi}$

$3.82 = d$

approx. 4 miles (rounded)

9-11)

a) Yes, could be since you have every one represented from your school at the assembly.

9-11)

b) Mean is 40.25 minutes.
Median is 42.5 minutes.

Either mean or median is an acceptable prediction since the distribution is fairly symmetrical.

9-12) $I = P \cdot r \cdot t$

$153 = 850 \cdot r \cdot 9$

$\frac{153}{7650} = \frac{7650r}{7650}$

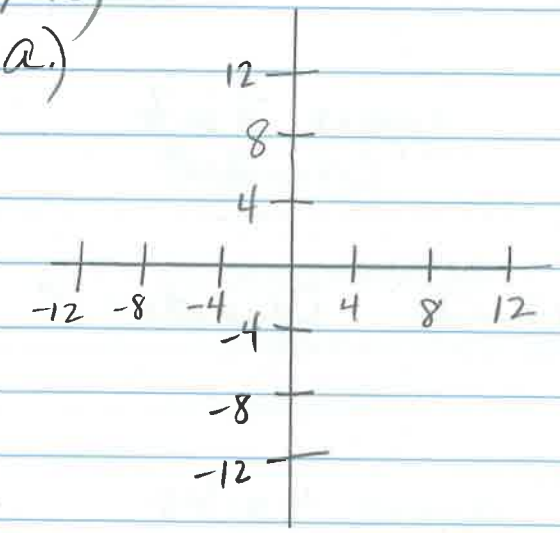
$0.02 = r$

2% interest rate

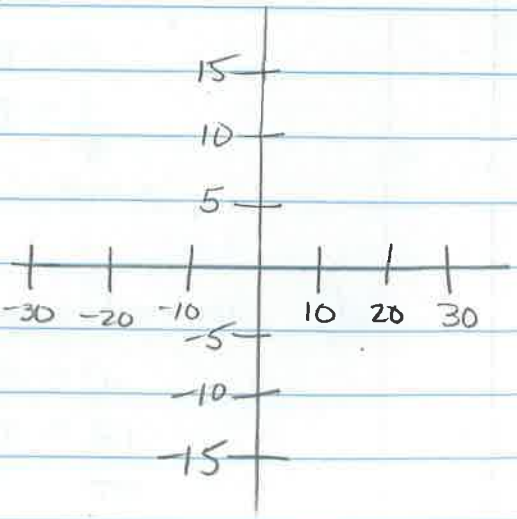
$1003 - 850 = 153$

9-13)

a)



b)



9-14)

Erasers	8	4	1	12	10	16	100
$	0.60	0.30	0.075	0.90	0.75	1.20	7.50

b) Yes, proportional. The table contains equivalent ratios of $/erasers.

c) $\frac{0.90}{12} = \frac{x}{144}$ $x = \$10.80$

9-15) Jack 120 songs on MP3 player

$P(\text{classical}) = \frac{2}{5}$ $P(\text{jazz}) = \frac{1}{3}$

$\frac{x}{120} = \frac{2}{5}$ (×24) $x = 48$ (×24)

48 classical

$\frac{x}{120} = \frac{1}{3}$ (×40) $x = 40$ (×40)

40 jazz

$48 + 40 = 88$ $120 - 88 = 32$ rock

9-16) radius = 3 in.

a) $C = \pi d$

$C = 3.14 \cdot 6$

$C = 18.84$ in.

or 6π

b) diameter = 27 cm

$C = \pi d$

$C = 3.14 \cdot 27$

$C = 84.78$ cm

or 27π

9-17)

Method of Sampling	Description of Actual Population
Call every hundredth name in the phone book.	People with phones who have their number listed.
Call people at home at 10 a.m.	**People who do not work outside the home.**
Ask every tenth person who leaves the mall.	**People who shop at the mall.**
Ask people leaving the bank.	**Mostly adults conducting business at the bank.**
Mail questionnaires to people.	**Adults who care enough about your topic to return the questionnaire.**
Ask everyone on the school bus.	**Students who ride the bus.**

9-18) $42 original price, on sale for 33% off. new price?

$$\begin{array}{r} 42 \\ \times .33 \\ \hline 126 \\ 1260 \\ \hline 13.86 \end{array} \qquad \begin{array}{r} {}^{3}\cancel{42}^{11}.{}^{9}\cancel{0}^{1}0 \\ -\ 13.86 \\ \hline 28.14 \end{array}$$

$28.14 sale price

9-19)
Both teams seem to be very even in total points; Team 1 is more consistent and has fewer very low scores, so it may be the better one to choose, even though Team 2 has a slightly higher median at this time.

9-20)
a) $23.6 + 12 = 35.6$

b) $16.5 + 52.43 = 68.93$

c) $46.21 - 31.2 = 15.01$

d) $27.5 - 13.11 = 14.39$

e) $4.5(6) = 27$

f) $55 \div 2 = 27.5$

9-21)
a) $90 - 65 = 25°$

b) $180 - 125 = 55°$

c) $63°$