Section 3.5 Dividing Rational Numbers

1. Multiply the following. Keep your answers as a fraction in simplest form. No calculators:

a) $\dfrac{3}{4} \div \dfrac{9}{12}$	b) $\dfrac{3}{7} \div \dfrac{21}{14}$	c) $\dfrac{18}{13} \div \dfrac{27}{39}$	d) $\dfrac{21}{8} \div 1\dfrac{3}{4}$
e) $\dfrac{32}{22} \div \dfrac{16}{33}$	f) $\dfrac{24}{15} \div \left(-1\dfrac{3}{5}\right)$	g) $\dfrac{24}{55} \div \dfrac{36}{25} \div \dfrac{35}{81}$	h) $2\dfrac{8}{21} \div \dfrac{70}{27} \div 2\dfrac{6}{27}$
i) $2.25 \div 1.25$	j) $2\dfrac{2}{3} \div 0.\overline{888}$	k) $0.3 \div 0.\overline{555}$	L) $1.\overline{66} \div 0.\overline{25}$
m) $3.20 \div -0.4$	n) $-12.80 \div 0.4$	o) $0.75 \div 0.875$	p) $0.021 \div -0.03$
q) $0.8 \div (-0.4) \div (0.75)$	r) $\dfrac{12}{25} \div \dfrac{42}{125} \div \dfrac{-15}{48}$	s) $0.875 \div 0.75 \div 0.8$	t) $0.\overline{25} \div 8.\overline{33} \div 0.6$

2. Determine the missing number in the box so that the expression will be true:

a) $\dfrac{2}{4} \div \boxed{} = \dfrac{4}{5}$	b) $0.4 \div \boxed{} = 1.\overline{333}$	c) $1.25 \div \boxed{} = 1.\overline{666}$
d) $-1.26 \div \boxed{} = 0.2$	e) $-1.4 \div \boxed{} = 1.\overline{777}$	f) $\boxed{} \div 1.2 = 2.25$

3. Jason has 14.70 in his wallet. He wants to buy candies that cost $0.35 each. How many can he purchase?

4. A plant grew $1.25\,inches$ every day. How many days will it require the plant to grow $36.5\,inches$?

5. David owns 40 shares of Apple stocks and the value dropped $2250.25. What was the drop of each share?

6. At 9pm, the temperature was $14.6°$ and at 3am, the temperature was $-5.3°$. What was the mean change in temperature? (ie: change in temperature each hour)

7. Evaluate without a calculator: $\left(\dfrac{1.\overline{428571} \div 1.4}{0.\overline{777} \times 0.\overline{333}} \right)^2$