SOLVING EQUATIONS: APPLICATION REVIEW

Answer each of the following questions in the space provided.

1. a) A car travels at 80 km/h for 3.5 hours. How far does the car travel if $d = st$.

b) Find the speed of a truck that travels 237.5 km in 2.5 h.

2. a) Using the formula for simple interest, I = Prt, determine the amount of interest earned on an investment of $4000 at 1.5% interest after 4 years.

b) Use the formula for simple interest above to determine the amount of time it would take for an investment of $500 at 2% interest to earn $100.

3. One measure of a baseball pitcher's performance is WHIP, walks and hits per inning pitched. This statistic relates the number of runners who get on base per inning, *r*, to the total number of walks, *w*, the total number of hits, *h*, and the total number of innings pitched, *I*, according to the formula $r = \frac{w+h}{i}$. Determine Jesse's WHIP based on the following stats.
   Walks: 16
   Hits: 22
   Total Innings: 31

4. The equation $s = \frac{w-10e}{t}$ models the speed in words per minute, *s*, at which someone types. The speed, *s,* is related to the number of words typed, *w*, and the number of *errors*, e, and the time spent typing, *t*.
   a) Cayden types 650 words in 6 min, with 5 errors. What is Cayden's typing speed?

   b) Rachel's typing speed is 80 word/min. She types 750 words in 8 min. How many errors did Rachel make?

5. A plumber charges a flat rate of $65 plus an hourly rate of $35 which can be modeled by the equation C = 35h + 65.

a) If a job took 7 hours, how much does the plumber charge the customer?

b) If the total cost of the job was $415, how many hours did the plumber work?