

## ACT COMPASS Preparation Worksheet

### Pre-algebra: Averages

- 1. A three – sided figure has sides that are 3 cm, 6 cm, and 15 cm. What is the average length per side?*  
**8 cm**
- 2. The height of four men are 210 cm, 220 cm, 191 cm, and 193 cm. What is their average height?*  
**203.5 cm**
- 3. What is the average number of students per class if 5 classes have a total of 120 students?*  
**24 students**
- 4. Carla has three test scores which are 84, 90, and 86. What must she earn on the next test to have an average test score of 90?*  
**100**
- 5. Bill has 4 test scores which are 82, 77, 75, and 84. He has to take a final exam which counts as two test grades. What must he score on his final to earn an average test score of 80?*  
**81**
- 6. Sandra is playing in a tennis doubles tournament. The rules say that the average age of the pair of players on each side must be ten years old or younger. Sandra is eight years old. Her partner must be what age ?*  
**12 years old or younger**
- 7. Juan has played in four baseball games this season. He struck out an average of twice per game. in the last three games, he didn't strike out at all. How many times did he strike out in the first game of the season?*  
**8**
- 8. Jerome took five spelling tests last semester. He scored 100% in all but one. His lowest score was 80%. What was his mean score for the spelling tests from last semester?*  
**96%**
- 9. Lucy bought seven pens. Four of the pens cost a dollar each. Three of the pens cost 30 cents each. What was the average cost of each pen?*  
**\$0.70**
- 10. After bowling four games, Rita's average was 99. What must she score in the 5th game to average 100?*  
**104**



11. *In a certain game where the score can be 0 – 100, five players average 80 points. What is the greatest number of the five who could have received 100 points.*  
**4**
12. *Renee ran a marathon in three hours. If she ran 10 miles in her first hour, what was her average speed, in miles per hour, for the remaining 16 miles?*  
**8 miles per hour**
13. *The average age of 30 soldiers is 25. The average age of the first 15 soldiers is 24. The average age of the last fourteen soldiers is 26. What is the age of the 16th soldier?*  
**26**
14. *Two movies average 1 hour and 45 minutes in length. If one lasts 2 hours and 15 minutes, how long is the other movie?*  
**1 hour and 15 minutes**
15. *On my last test, five people earned 100%, four earned 95%, six earned 90%, and five earned 80%. What was the class average?*  
**91%**
16. *The average of three numbers is 20. If one of the numbers is 15, what is the average of the other two?*  
**22.5**
17. *The average of four numbers is 20. If one number is removed, the average is 18. What number was removed?*  
**26**