

Geometry – Semester 2
Homework after Assessment #3

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1. For each of four months, the table below gives the number of games a basketball team played, the number of free throws the team attempted, and the number of free throws the team made.

Month	Games	Free throws attempted	Free throws made
September	4	78	69
October	6	107	93
November	8	120	102
December	5	83	76

To the nearest tenth, what is the average number of free throws that the team made per game in November?

- A. 8.5 B. 10.2 C. 12.8 D. 15.0 E. 17.3

2. Point $R(1,5)$ is in the standard (x,y) coordinate plane. What must be the coordinates of point S so that the line $x = -3$ is perpendicular bisector of $\overline{RS}$?

- A. $(1,-11)$ B. $(-3,5)$ C. $(-5,1)$ D. $(-7,5)$ E. $(-9,-3)$

3. What is the distance between the points $(6,-5)$ and $(2,3)$ in a standard (x,y) coordinate plane?

- A. $4\sqrt{3}$ B. 7 C. 8 D. $4\sqrt{5}$ E. 10

4. Mickey is living in a house with 11 other people, and each person gets his own room. There are 3 bedrooms on the first floor, 5 on the second, and 4 on the third. The housemates are deciding who gets what room by drawing numbers out of a hat. If Mickey draws first, what is the probability that he will get a room on the third floor?

- A. $\frac{1}{12}$ B. $\frac{1}{6}$ C. $\frac{1}{4}$ D. $\frac{1}{3}$ E. $\frac{5}{12}$

5. What is the solution to the equation $4x + (+2x + 5) = -3$?

- A. $-\frac{1}{2}$ B. $-\frac{1}{3}$ C. $\frac{1}{4}$ D. $\frac{1}{3}$ E. 1

6. In the standard (x,y) coordinate plane, $\left(4, \frac{5}{3}\right)$ is half-way between $(a, a+3)$ and $(2a, a-5)$. What is the value of a ?

- A. $\frac{4}{3}$ B. $\frac{8}{3}$ C. 4 D. $\frac{9}{2}$ E. 6

$$\begin{array}{r} 8 \overline{) 102} \\ 64 \\ \hline 38 \\ 32 \\ \hline 60 \\ 56 \\ \hline 40 \end{array}$$

$$\begin{array}{r} 6x + 5 = -3 \\ 6x = -8 \\ x = -\frac{2}{3} \end{array}$$

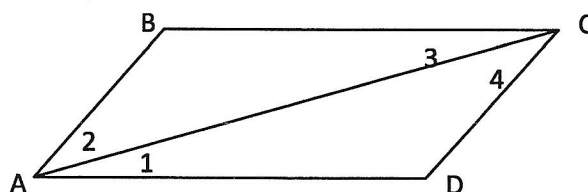
$$5x^2 + 4x = 8x^2 + 10x$$

$$3x^2 - 6x = 0$$

7. What is the sum of all the solutions of the equation $\frac{5x + 4}{2x} = \frac{x + 5}{x}$?
- A. -2 B. 0 C. 2 D. 4 E. 6
8. The Oilco Oil Company has 3 kerosene production units at its refinery. These units produce 5,000 liters, 10,000 liters, and 15,000 liters of kerosene per day, respectively. If all 3 units operate simultaneously, how many days do they require to produce 240,000 liters of kerosene?
- A. $2\frac{2}{3}$ B. 8 C. 16 D. 24 E. 48
9. Which of the following represents the multiplicative inverse of the complex number $2 - i$?
- A. $2 + i$ B. $i - 2$ C. $\frac{2 + i}{3}$ D. $\frac{2 - i}{3}$ E. $\frac{2 + i}{5}$
10. The measure of one interior angle of a regular polygon is 156° , how many sides does the polygon have?

11. Given: $\overline{AB} \parallel \overline{DC}, \overline{BC} \parallel \overline{AD}$

Prove: $\overline{AB} \cong \overline{CD}$



Statements

Reasons