MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
JANUARY 2016 GEOMETRY • Remember that if the answer you get is different from the date… **you need to try the problem again!** • **Do not** leave any question blank. If you don't know how to solve it… **ask for help!** • **Show all your work!** The process is more important than the answer.				**1** The coordinates of A are $(-3, 2)$ and the coordinates of B are $(5, 0)$. Find the coordinates of the midpoint of $\overline{AB}$.	**2** Find the distance between the points $(6.48, 4.46)$ and $(4.76, 5.48)$.	**3** D is in the interior of $\angle ABC$. Solve for x, given that $m\angle ABD = 3x - 10$, $m\angle DBC = 40$, and $m\angle ABC = x + 36$.
4 L is the midpoint of $\overline{RA}$. If $RL = 5x + 10$ and $RA = 60$, find the value of x.	**5** Find the equation of the line through the points $(-2, -5)$ and $(1, 10)$.	**6** ΔABC is a right triangle with hypotenuse of length 8 and one leg of length $2\sqrt{7}$. Find the length of the other leg.	**7** What is the slope of a line parallel to the line through $(-1, 4)$ and $(0, 11)$?	**8** What is the slope of a line perpendicular to the line through $(16, -1)$ and $(24, -2)$?	**9** Use the figure on the back. If $m\angle 2 = 8x - 10$ and $m\angle 5 = 4x + 26$, find the value of x.	**10** Find the y-intercept of the perpendicular bisector of $\overline{AB}$ where A is at $(3, 6)$ and B is at $(5, 10)$.
11 $\overrightarrow{RP}$ is the angle bisector of $\angle TRM$. $m\angle TRM = 68$ and $m\angle PRM = 3x + 1$. Find the value of x.	**12** Alice drove 162 miles and found that she had used 13.5 gallons of gas. How many miles per gallon does Alice's car get?	**13** Use the figure on the back. If $m\angle 2 = 3(x - 10) - 50$ and $m\angle 4 = -5(2x - 6) + 59$, solve for x.	**14** J is between A and W on $\overline{AW}$. Solve for x if $AJ = 29$, $JW = -2x - 10$, and $AW = -x + 5$.	**15** Find the y-intercept of the line through $(-6, 13)$ parallel to the line through the points $(6, 4)$ and $(9, 5)$.	**16** Find the y-intercept of the perpendicular bisector of $\overline{AB}$ given that A has coordinates $(4, 9)$ and B is at $(8, 17)$.	**17** A number is doubled and then increased by 42. The result is 76. What is the number?
18 Evaluate $\frac{342}{5} \div \frac{19}{5}$.	**19** Use the figure on the back. If $m\angle 4 = 3x + 13$ and $m\angle 6 = 6x - 4$, solve for x.	**20** Find the distance between the points $(4.41, 6.75)$ and $(-6.13, -10.24)$.	**21** Bob is a waiter. He makes $9.32 per hour, plus tips, which average $8.80 per table. One day, Bob worked 10 hours and made $278. How many tables did Bob serve?	**22** Find the equation of the line through $(4, 26)$ and parallel to $y = x + 9$.	**23** Find the equation of the line through $(2, 19)$ and perpendicular to $y = \frac{1}{2}x - 8$.	**24** Find the midpoint of $\overline{LM}$ if L has coordinates $(1, 1)$ and M has coordinates $(3, 7)$.
25 Give two points such that the slope of the line through those points is 25.	**26** H is in the interior of $\angle MAT$. $m\angle HAM = 22$, $m\angle MAT = 5x + 3$, & $m\angle HAT = 3x - 1$. Find $m\angle HAT$ in degrees.	**27** Carly received 90 votes for ASB president, which was 36 more than twice the amount Danny received. How many votes did Danny get?	**28** A rectangle has side lengths 9 and $\sqrt{703}$. What is the distance from the bottom-left corner to the top-right corner of the rectangle?	**29** A company charges $58 for one hour & $87 for two hours. Write an equation representing the cost, y, of renting a car for x hours.	**30** Use the figure on the back. If $m\angle 1 = 4x + 6$ and $m\angle 8 = 8x - 18$ find $m\angle 1$ in degrees.	**31** Find the y-intercept of the line through $(5, 35)$ and parallel to the line through the points $(4, 29)$ and $(9, 33)$.