Name: Class: ................

Mathematics teacher:

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| 1. | Give the domain of the following expression. Carry out the operation and simplify your final result.   |  |  | | --- | --- | | a |  | | b |  | | c |  | | d |  | | e |  | | f |  | | g |  | |
| 2. | Solve the following inequalities in the set of real numbers.   |  |  | | --- | --- | | a |  | | b |  | | c |  | | d |  | | e |  | | f |  | |
| 3. | Draw a 45° central angle in a circle whose radius is 10 cm. Connect the endpoints of the arc with a line segment. Find the distance between this chord and the centre of the circle.   |  |  | | --- | --- | | a |  | | b |  | | c |  | | d |  | | e |  | | f |  | |
| 4. | Find the ***y-***intercept of the following functions. If the function does not have a ***y-***intercept then write ’It does not exist’ on the dotty line.   |  |  | | --- | --- | | a |  | | b |  |  1. y = ……………… 2. y = ……………... |
| 5. | Find the ***x-***intercept of the following functions. If the function does not have an ***x-***intercept then write ’It does not exist’ on the dotty line.   |  |  | | --- | --- | | a |  | | b |  |  1. x = ……………. 2. x = ……………. |
| 6. | The difference between the two legs of a right triangle is 7 cm, and the area of the triangle is 60 cm2.   |  |  | | --- | --- | | a |  | | b |  | | c |  | | d |  | | e |  | | f |  | | g |  | | h |  | | i |  | | j |  | | k |  |  1. Find length of the legs and the hypotenuse. 2. Calculate the radius of the circumscribed circle. 3. Find the distance between the centroid and the vertex of the right angle. |

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| 7. | A test was written by a class and the total was 50 points. The results of the 27-member class were put into the following table:   |  |  | | --- | --- | | a |  | | b |  | | c |  | | d |  | | e |  | | f |  | | g |  | | h |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Total score | 50 | 46 | 44 | 40 | 39 | 35 | 27 | 18 | 13 | 11 | 10 | | Frequency | 2 | 3 | 4 | 3 | 2 | 3 | 5 | 1 | 2 | 1 | 1 |  1. Find the arithmetic mean of the scores. Round your result to the nearest tenth.   Arithmetic mean: ………………  An excursion was organized for only those students who have gained at least 70 % of the total points.  How many students could participate in this excursion? ………………………………   1. Draw a pie chart containing the students who have participated in this excursion and those who have not. Give the central angles of the two circular sectors.   kör.PNG |
| 8. | The sum of the two roots of a quadratic function is . The product of the roots is   |  |  | | --- | --- | | a |  | | b |  | | c |  | | d |  | | e |  | | f |  | | g |  | | h |  |  |  |  | | --- | --- | | a |  | | b |  | | c |  | | d |  | | e |  | | f |  | | g |  |  1. Find the values of the coefficients *b* and *c* in the set of real numbers. 2. Plot the graph of the former function , if the domain of the function is .      1. Describe the function , if the domain is .   range: …………………………….  minimum: ……………………………….  upper limit: ……………………………. |