

2학기 1차고사 ( 수학 )과 ( 2 )학년 정답

번호	배점	정답	비고
1	3	2	
2	3	3	
3	3	1	
4	3	5	
5	3	1	
6	3	5	
7	4	4	
8	4	2	
9	4	1	
10	4	4	
11	4	3	
12	5	4	
13	5	2	
14	5	3	
15	5	5	
16	5	2	
17	5	1	
18			
19			
20			
서1	3	$17\text{cm}^2$	
서2	5	$19^\circ$	
서3	4	$\frac{35}{4}\text{cm}$	
서4	6	<p>외접원의 반지름이 <math>\frac{17}{2}\text{cm}</math>이므로, <math>\widehat{\text{BAC}} = \frac{17}{2}\pi\text{cm}</math>          내접원의 반지름을 <math>r</math>이라고 하면,  <math>\frac{1}{2} \times 8 \times 15 = \frac{1}{2} \times 8 \times r + \frac{1}{2} \times 15 \times r + \frac{1}{2} \times 17 \times r</math>  <math>r = 3\text{cm}</math>          내접원의 둘레의 길이는 <math>6\pi\text{cm}</math>          색칠한 부분의 둘레의 길이는 <math>\frac{17\pi}{2} + 6\pi + 17 = (\frac{29}{2}\pi + 17)\text{cm}</math></p>	
서5	7	<p>(1) <math>\angle \text{BAD} + \angle \text{ABC} = 180^\circ</math> 이므로,  <math>\triangle \text{AEB}</math>에서 <math>\angle \text{BAE} + \angle \text{ABE} = 90^\circ</math>          따라서, <math>\angle \text{AEB} = 90^\circ</math>          (2) <math>\square \text{EFGH}</math>에서  <math>\angle \text{HEF} = \angle \text{AEB}</math>(맞꼭지각) <math>= 90^\circ</math>  <math>\angle \text{HGF} = \angle \text{DGC}</math>(맞꼭지각) <math>= 90^\circ</math>  <math>\angle \text{BHC} = 180^\circ - (\angle \text{HBC} + \angle \text{HCB}) = 90^\circ</math>  <math>\angle \text{AFD} = 180^\circ - (\angle \text{FAD} + \angle \text{FDA}) = 90^\circ</math>          네 각이 모두 <math>90^\circ</math> 이므로 <math>\square \text{EFGH}</math>는 직사각형</p>	
서6	7	<p><math>\triangle \text{ABC}</math>와 <math>\triangle \text{CBD}</math>에서  <math>\angle \text{B}</math>는 공통, <math>\angle \text{BAC} = \angle \text{BCD}</math>이므로  <math>\triangle \text{ABC} \sim \triangle \text{CBD}</math> (AA 답음) <span style="float: right;">...①</span>  <math>\overline{\text{AB}} : \overline{\text{CB}} = \overline{\text{AC}} : \overline{\text{CD}}</math>이므로  <math>\overline{\text{AB}} : 3 = 4 : 2</math>  <math>\therefore \overline{\text{AB}} = 6(\text{cm})</math> <span style="float: right;">...②</span>          또, <math>\overline{\text{AB}} : \overline{\text{CB}} = \overline{\text{BC}} : \overline{\text{BD}}</math>이므로  <math>6 : 3 = 3 : \overline{\text{BD}}</math>  <math>\therefore \overline{\text{BD}} = \frac{3}{2}(\text{cm})</math> <span style="float: right;">...③</span>  <math>\therefore \overline{\text{AD}} = \overline{\text{AB}} - \overline{\text{BD}} = 6 - \frac{3}{2} = \frac{9}{2}(\text{cm})</math> <span style="float: right;">...④</span></p>	