

2018 Four-by-Four Competition  
Answer Key

1.	$64 - 8\sqrt{61}$	<b>1</b>	21.	$13.\bar{3}$ or $13\frac{1}{3}$ or $\frac{40}{3}$	<b>21</b>
2.	348	<b>2</b>	22.	20123	<b>22</b>
3.	-495	<b>3</b>	23.	$8\sqrt{3}$	<b>23</b>
4.	$3\sqrt{3}$	<b>4</b>	24.	$\frac{469\pi\sqrt{5}}{100}$	<b>24</b>
5.	$(-.4, -1.8)$ or $(-\frac{2}{5}, -\frac{9}{5})$	<b>5</b>	25.	Icosahedron	<b>25</b>
6.	175	<b>6</b>	26.	6	<b>26</b>
7.	48	<b>7</b>	27.	2.89	<b>27</b>
8.	496	<b>8</b>	28.	$29.1\bar{6}$ or $29\frac{1}{6}$ or $\frac{175}{6}$	<b>28</b>
9.	-.5 or $-\frac{1}{2}$	<b>9</b>	29.	(0,0)	<b>29</b>
10.	693	<b>10</b>	30.	$\frac{1}{4}$	<b>30</b>
11.	7980	<b>11</b>	31.	24	<b>31</b>
12.	300	<b>12</b>	32.	$6.926 \times 10^4$	<b>32</b>
13.	256	<b>13</b>	33.	$\frac{\pi}{2}$	<b>33</b>
14.	$\frac{9}{52}$	<b>14</b>	34.	53	<b>34</b>
15.	1736	<b>15</b>	35.	143	<b>35</b>
16.	7	<b>16</b>	36.	$\frac{1-2d}{1+d}$	<b>36</b>
17.	$10\sqrt{3}$	<b>17</b>	37.	2221	<b>37</b>
18.	-160	<b>18</b>	38.	5	<b>38</b>
19.	.96 or $\frac{24}{25}$	<b>19</b>	39.	6	<b>39</b>
20.	$375\pi$	<b>20</b>	40.	$x = -2y - 1 = \frac{5}{3}z + \frac{19}{3}$	<b>40</b>

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