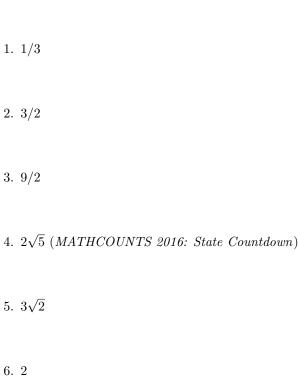
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9. Iı	n regular pentagon $ABCDE$ , diagonals $\overline{AC}$ an	$\overline{AD}$ meet diagonal $\overline{BD}$ at points $X$	and

Y, respectively. Given that AB = 1, what is the length of  $\overline{XY}$ ? Express your answer as a common fraction in simplest radical form. [We found many of the angles in the diagram last

week, and these will be helpful for finding isosceles triangles and similar triangles.]

your answer as a common fraction.

10. Tosh rolls two standard six-sided dice while Brant rolls one standard six-sided die. What is the probability that the larger of Tosh's rolls is (strictly) greater than Brant's roll? Express



- 9. In regular pentagon ABCDE, diagonals  $\overline{AC}$  and  $\overline{AD}$  meet diagonal  $\overline{BD}$  at points X and Y, respectively. Given that AB = 1, what is the length of  $\overline{XY}$ ? Express your answer as a common fraction in simplest radical form.
- 10. Tosh rolls two standard six-sided dice while Brant rolls one standard six-sided die. What is the probability that the larger of Tosh's rolls is (strictly) greater than Brant's roll? Express your answer as a common fraction. |125/216|