1. David had 38 hours of free time last week, and he spent 25 hours working at his

dad’s store. He always gives his dad the same portion of his free time. This week, he worked only 17hours at the store. How much free time did David have this week?

**Solve in as many ways as possible without using the cross product.**

2. A drawing is 11.25 cm wide by 23.5 cm tall. The width of the image of the drawing projected onto a screen is 2.7 m. How tall is the drawing on the screen?

**Solve in as many ways as possible without using the cross product.**

3. Triangles IDK and NMP are similar. The perimeter of the smaller triangle IDK is 133 ft. The lengths of two corresponding sides on the triangles are 53 ft and 212 ft. What is the perimeter of NMP?

**Solve in as many ways as possible without using the cross product.**

4. A baseball pitcher won 52% of the games he pitched. If he pitched 25

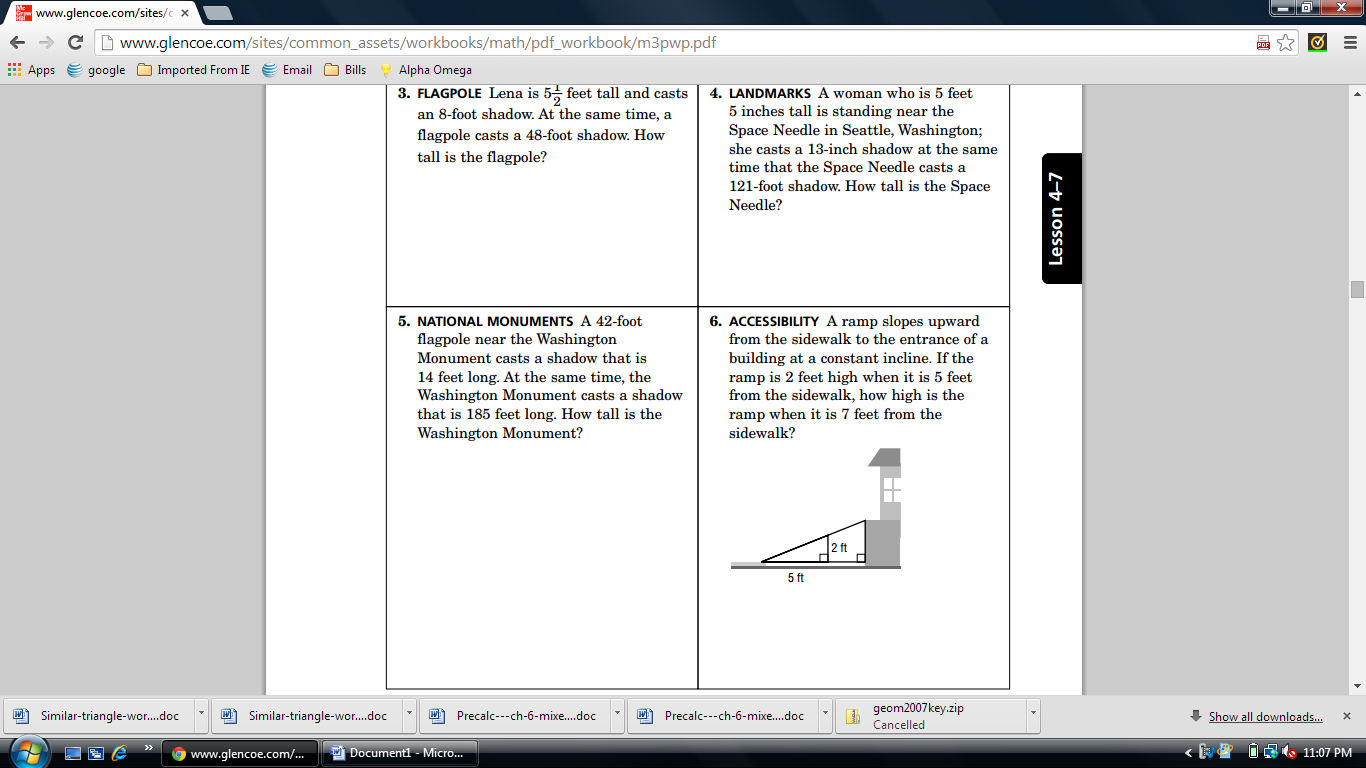
ball games, how many games did he win?

**Solve in as many ways as possible without using the cross product.**

5. An observer is near a river and wants to calculate the distance across the river. He measures the [angle](javascript:def('/Glossary/glossaryterm.aspx?word=Angle',%20500,%20500);) between his observations of two points on the shore, one on his [side](javascript:def('/Glossary/glossaryterm.aspx?word=Side',%20500,%20500);) and one on the other side, to be 28º. The distance between him and the [point](javascript:def('/Glossary/glossaryterm.aspx?word=Point',%20500,%20500);) on his [side](javascript:def('/Glossary/glossaryterm.aspx?word=Side',%20500,%20500);) of the river can be measured and is 300 feet. The [angle](javascript:def('/Glossary/glossaryterm.aspx?word=Angle',%20500,%20500);) formed by him, the [point](javascript:def('/Glossary/glossaryterm.aspx?word=Point',%20500,%20500);) on his [side](javascript:def('/Glossary/glossaryterm.aspx?word=Side',%20500,%20500);) of the river, and the [point](javascript:def('/Glossary/glossaryterm.aspx?word=Point',%20500,%20500);) directly on the opposite [side](javascript:def('/Glossary/glossaryterm.aspx?word=Side',%20500,%20500);) of the river is 128º. What is the distance across the river?

**Solve in as many ways as possible without using the cross product.**

6. A ramp slopes upward from the sidewalk to the entrance of a building at a constant incline. If the ramp is 2 feet high when it is 5 feet from the sidewalk, how high is the ramp when it is 7 feet from the sidewalk?



**Solve in as many ways as possible without using the cross product.**