# College and Career Readiness Mathematics 

## Scoring Rubric <br> (Draft)

| Short Tasks |  |  |  |  |
| :--- | :--- | :--- | :---: | :---: |
| Q | Answer | Points |  |  |
| 1 | $\sqrt[6]{7}, \sqrt{7}$ | 1 |  |  |
| 2 | $x^{4}-4 x^{3}-23 x^{2}+19 x-35$ | 1 |  |  |
| 3 | $\bullet$ Graph C <br> $\bullet$ Graphs A and B | 1 |  |  |
| 4 | $\sqrt{3}$ | Medians are: <br> A 28 <br> B 36 <br> C 32 <br> Aaron and Claude are equally close to 30. <br> So they are equally good best estimators. |  |  |
| 5 | Total |  |  | 5 |


|  | Yogurt | Rubric |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Points | Section points |
| 1. | Gives correct answer: 15¢ <br> Shows calculation such as: $\frac{20}{100} \times 75$ |  | $\begin{aligned} & 1 \\ & 1 \end{aligned}$ | 2 |
| 2. | Gives correct answer: $\mathbf{5 0}$ gallons <br> Shows calculation such as: $1600 \times \frac{1}{4} \times \frac{1}{8}$ |  | $\begin{aligned} & 1 \\ & 1 \end{aligned}$ | 2 |
| 3. | Gives correct answer: $\mathbf{2 5 0 0}$ gallons <br> Shows calculation such as: $50 \times 10 \times 5$ |  | $\begin{gathered} 2 \\ 1 \mathrm{ft} \end{gathered}$ | 3 |
| 4. | Gives correct answer: 40\% <br> Partial credit <br> Gives answer :140\% <br> Shows calculation such as: $\frac{2}{5} \times 100$ |  | 2 <br> (1) <br> 1 ft | 3 |
|  |  | Total Points |  | 10 |


| Hopewell Geometry | Rubric |  |
| :---: | :---: | :---: |
|  | Points | Section points |
| 1. Gives correct answer: 7.1 (accept 7 or $5 \sqrt{2}$ ) Shows correct work such as: $\left.\sqrt{( } 1^{2}+7^{2}\right)$ | $\begin{aligned} & 1 \\ & 2 \end{aligned}$ | 3 |
| 2. Gives correct answer: $\mathbf{3 6 . 8}^{\mathbf{o}}$ to $\mathbf{3 6 . 9}{ }^{\circ}$ <br> Shows correct work such as: $\sin ^{-1} \frac{3}{5}$ or $\cos ^{-1} \frac{4}{5}$ or $\tan ^{-1} \frac{3}{4}$ | $\begin{aligned} & 1 \\ & 1 \end{aligned}$ | 2 |
| 3. Gives correct answer: Triangle A <br> Gives correct explanation such as: <br> Triangle 1 is an enlargement of Triangle A by a scale factor of 3 . | $1$ | 2 |
| 4. Gives correct answer: No <br> and <br> Gives a correct explanation such as finds the lengths of all three sides, ( $\sqrt{225}, \sqrt{50}, \sqrt{245}$ ), and shows they don't satisfy the Pythagorean Rule. $245 \neq 225+50$. <br> Accept other methods including: <br> - Uses trigonometry to find the angles (71,6, 81.9, 25.5) <br> - Triangle 3 is isosceles $\therefore$ it has two $45^{\circ}$ angles. <br> Triangles 1 and 2 are not isosceles $\therefore$ they do not have $45^{\circ}$ angles. <br> Angle in shaded triangle $=180^{\circ}-45^{\circ}-$ non $45^{\circ}$ angle $\therefore \neq 90^{\circ}$ <br> Partial credit <br> Gives a partially correct explanation. | 3 <br> (1) | 3 |
| Total Points |  | 10 |

\begin{tabular}{|c|c|c|c|}
\hline \& \multicolumn{3}{|l|}{Security Camera Rubric} \\
\hline \& \& Points \& Section points \\
\hline 1. \& \begin{tabular}{l}
Draws a straight line from the security camera \((\mathrm{P})\) to the opposite side of the room as shown. May describe the sight line. \\
This line shows that F and H cannot be seen by the camera at P . Minus 1 for extras.
\end{tabular} \& 1
2 \& 3 \\
\hline 2. \& Correctly, shows/explains the area that cannot be seen by the camera. Three of the twenty squares cannot be seen
\[
3 / 20=15 \%
\] \& 1 \& 3 \\
\hline 3. \& \begin{tabular}{l}
Q can be placed one square left or right of the centre. \\
The area of two of the twenty squares cannot be seen if the camera is placed at Q ( or to the side of Q ), the centre of the side. \(2 / 20=10 \%\) \\
Partial credit \\
Correctly shows the area that cannot be seen but no calculation.
\end{tabular} \& 1

1
2

(1) \& 4 <br>
\hline \& Total points \& \& 10 <br>
\hline
\end{tabular}

| Sidewalk Stones | Rubric |  |
| :---: | :---: | :---: |
|  | Points | Section points |
| Gives correct answers and shows correct calculations such as: <br> Number of gray Stones $4 n^{2}+(2 n+1)^{2}=8 n^{2}+4 n+1$ <br> Number of white stones $4 n(2 n+1)=8 n^{2}+4 n$ <br> Calculates pattern number for 841 gray stones $\begin{aligned} & 4 n^{2}+(2 n+1)^{2}=841 \\ & 2 n^{2}+n-210=0 \\ & (2 n+21)(n-10)=0 \\ & \mathbf{n}=\mathbf{1 0} \end{aligned}$ <br> Provides clear explanations <br> Partial credit <br> Provides some explanation <br> Finds the number of white stones $4 \times 10 \times 21=\mathbf{8 4 0}$ | 3 <br> 2 <br> 2 <br> 2 <br> (1) | 10 |
| Total Points |  | 10 |


| Sugar Prices | Rubric |  |
| :--- | :---: | :---: |
|  | Points | Section <br> points |
| (a). Gives correct answer: D | 1 | 1 |
| (b). Gives correct answer: B | 2 |  |
| ©. Gives correct answer: C and E | 2 | 2 |
| (d). Gives correct answer: A and C | 2 |  |
| (e). Gives correct answer: C |  |  |
| Gives correct explanation such as: price $\div$ weight is smallest ratio | 2 | 2 |

