Scoring Criteria:
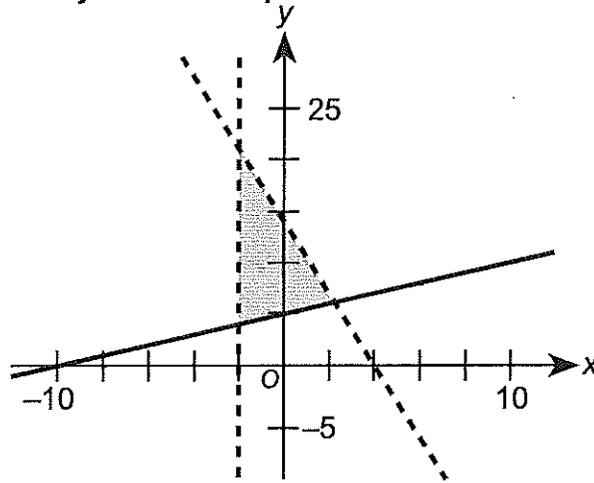
1)

A 4-point response may include, but is not limited to, the following points:

A. **Correct graph of the system of inequalities:**

Explanation of how the answer was found:

For $x > -2$:

I graphed the boundary line $x = -2$ as a vertical line through $(-2,0)$. I shaded toward the origin for x > -2 since $(0,0)$ makes the inequality x > -2 true. I made the boundary line dotted since there is a greater than sign instead of a greater than or equal to sign.

For $2x - 5y \leq -20$:

I found the x- and y-intercepts to graph the boundary line. To find the x-intercept, I put 0 in for y for the boundary equation. To find the y-intercept, I put 0 in for x for the boundary equation. I connected the 2 intercepts with a solid line since there is a less than or equal to sign instead of a less than sign. I tested $(0,0)$ to determine the shading. Since 0 is not less than or equal to −20, I shaded away from the origin.

For $y < -3x + 12$:

I found the points on the graph of the boundary line by substituting values of x into the boundary line equation. I connected the points with a dotted line since there is a less than sign instead of a less than or equal to sign. I tested $(0,0)$ to determine the shading. Since 0 is less than 12, I shaded toward the origin. Then, I shaded the portions of the graph that represent the intersection of the inequalities.

B. **Correct points of intersection:** $\left(-2, \frac{16}{5}\right)$, $(-2,18)$, and $\left(\frac{40}{17}, \frac{84}{17}\right)$

Appropriate work needed to find the answer:
$2(-2) - 5y = -20$
$-4 - 5y = -20$

$-5y = -16$

$y = \dfrac{16}{5}$

$y = -3(-2) + 12 = 6 + 12 = 18$

$2x - 5(-3x + 12) = -20$

$2x + 15x - 60 = -20$

$17x = 40$

$x = \dfrac{40}{17}$

$y = -3\left(\dfrac{40}{17}\right) + 12 = \dfrac{-120}{17} + \dfrac{204}{17} = \dfrac{84}{17}$

Explanation of how the answer was found: To find the intersection of $x = -2$ and $2x - 5y = -20$, I substituted $x = -2$ into $2x - 5y = -20$ and solved for y. To find the intersection of $x = -2$ and $y = -3x + 12$, I substituted $x = -2$ into $y = -3x + 12$ and solved for y. To find the intersection of $2x - 5y = -20$ and $y = -3x + 12$, I substituted $y = -3x + 12$ into $2x - 5y = -20$ and solved for x. Then, I substituted the solution for x back into $y = -3x + 12$ to find y.

Rubric:

4   A response at this level provides evidence of thorough knowledge and understanding of the subject matter.
- The response addresses all parts of the question or problem correctly.
- The response demonstrates efficient and accurate use of appropriate procedures.
- The explanation of strategies used in the response shows evidence of a good understanding of mathematical concepts and principles, and it does not contain any misconceptions.
- The explanation in the response is clear and coherent.

3   A response at this level provides evidence of competent knowledge and understanding of the subject matter.
- The response addresses most parts of the question or problem correctly.
- The response includes some minor errors but generally uses appropriate procedures accurately.
- The explanation of strategies used in the response shows some evidence of a good understanding of mathematical concepts and principles, and it contains few, if any, misconceptions.
- The explanation in the response is mostly clear and coherent.

2   A response at this level provides evidence of a basic knowledge and understanding of the subject matter.
- The response addresses some parts of the question or problem correctly.
- The response includes a number of errors but demonstrates some use of appropriate procedures.
- The explanation of strategies used in the response shows a little evidence of understanding of mathematical concepts and principles, but it may contain some evidence of misconceptions.
- The explanation in the response is partially clear, but some parts may be difficult to understand.

1   A response at this level provides evidence of minimal knowledge and understanding of the subject matter.
- The response addresses a few parts of the problem correctly, but the response is mostly incorrect.
- The response includes inappropriate procedures or simple manipulations that show little or no understanding of correct procedures.
- The explanation of strategies used in the response shows little or no evidence of understanding of mathematical concepts and principles, and it may contain evidence of significant misconceptions.
- Many parts of the explanation are difficult to understand.

0   A response at this level is not scorable. The response is off-topic, blank, hostile, or otherwise not scorable.