Exam

(4) $\frac{y}{6} + \frac{2y-1}{2} = \frac{y+1}{3}$.

$6\left[\frac{y}{6} + \frac{2y-1}{2}\right] = 6\left[\frac{y+1}{3}\right]$

$y + 3(2y-1) = 2(y+1)$

$y + 6y - 3 = 2y + 2$.

$7y - 3 = 2y + 2$

$5y - 3 = 2$

$5y = 5$

$\boxed{y = 1}$

(6) $|x-4| = |2x+1|$

either $x - 4 = 2x + 1$ or $x - 4 = -(2x+1)$

$-4 = x + 1$ $x - 4 = -2x - 1$.

$-5 = x$ $3x - 4 = -1$

$3x = 3$

So $x = 1$ or -5. $x = 1$

(11) The sum of 3 consecutive odd integers is 477. What's the smallest of the 3?

$\frac{477}{3} = 159$, the previous one is $159 - 2 = 157$.

(8) If $|3w - 8| > -3$. The solution set would be

All real numbers because an absolute value is always greater than negative.

(15) Is a triangle with sides 12.9, 17.2 and 21.5 a right triangle?

$12.9^2 + 17.2^2 = 166.41 + 295.84 = 462.25$

$21.5^2 = 462.25 = 12.9^2 + 17.2^2$

So it is a right triangle.

(26). The equation of the line perpendicular to $6x-3y=$ and passing through (7,1) has a y-intercept of?

line 1: $6x - 3y = 9$

$-3y = 9 - 6x$

$y = -3 + 2x$

line 2 $\perp$ line 1 so the slope of line 2 is $-\frac{1}{2}$.

line passes through (7,1), $y = mx+b$, $y=1$, $x=7$, $m=$

$1 = (-\frac{1}{2})(7) + b$

$1 = -\frac{7}{2} + b$

$\frac{9}{2} = b$.

$(0, \frac{9}{2})$ and it's "none of the above"

(37) If $f(3)=7$ for a linear function and its slope is 2. its y-intercept must be?

$\because f(3)=7$ $\therefore$ the line passes through (3,7)

we also have $m=2$, and $x=3, y=7$

$\therefore y=mx+b$ plug in $7=(2)(3)+b \Rightarrow \boxed{b=1}$

(39) The equation $6y+15=0$ has a slope of ?

This is an equation with only y in it

So it's a horizontal line, which has slope of zero

(40). If a line has a slope of 3, a line perpendicular to it must have a slope of

negative reciprocal of 3 is $\boxed{-\frac{1}{3}}$