

Quiz 17

1. (a) + (b) $38 = 7(\underline{5}) + \underline{3}$, so

$$38 \operatorname{div} 7 = 5$$

$$38 \operatorname{mod} 7 = 3$$

(c) + (d) $-38 = 7(\underline{-6}) + \underline{4}$, so

$$-38 \operatorname{div} 7 = -6$$

$$-38 \operatorname{mod} 7 = 4$$

2. $13 - (-8) = 21 = 3 \times 7$, so

(a) $13 \equiv -8 \pmod{3}$ true

(b) $13 - (-8) = 21 \neq 0 \pmod{5}$, so
false

(c) $13 - (-8) = 21 = 7 \times 3$, so

$13 \equiv (-8) \pmod{7}$ true