Preview of rep embedding

Def rep embedding: ① exact, ② k-linear, ③ faithful, ④, ⑤ pre indecom, ⑥ ref iso

strict rep embedding: exact, k-linear, faithful, full, ~~pre indecom, ref iso~~

②③④ ⇒ ⑤⑥ 0②③⑤ ⇒ ④

E.g. of strict rep emb:

1. $\pi: A \twoheadrightarrow B$ in Comk $\rightsquigarrow$ $F^{\pi}_{B,A}: \mathrm{Mod}(B) \to \mathrm{Mod}(A)$

   e.g. $Q \subseteq Q'$ $\rightsquigarrow$ $F^{\subseteq}: \mathrm{Rep}(Q) \to \mathrm{Rep}(Q')$

   $\pi: kQ' \twoheadrightarrow kQ$ $\quad$ $F^{\pi}_{kQ',kQ}$

2. $Q \rightsquigarrow Q^{k\pm}$ $\rightsquigarrow$ $F^{k\pm}: \mathrm{Rep}(Q) \to \mathrm{Rep}(Q^{k\pm})$

   Cor $Q \rightsquigarrow Q^{bi}$ $\rightsquigarrow$ $F^{bi}: \mathrm{Rep}(Q) \to \mathrm{Rep}(Q^{bi})$

   e.g. $F(n) \rightsquigarrow k(n+1)$ $\rightsquigarrow$ $F^{bi}: \mathrm{Mod}(F(n)) \to \mathrm{Rep}(k(n+1))$

3. $\mathrm{Mod}(F(2)) \to \mathrm{Rep}(1 \to 2 \rightrightarrows 3)$ $\quad$ $\mathrm{Mod}(k(3)) \to \mathrm{Rep}(S(5))$

4. $\mathrm{Br}_{F(n),F(2)}: \mathrm{Mod}(F(n)) \to \mathrm{Mod}(F(2))$

   Cor $\mathrm{Br}_{B,F(2)}: \mathrm{Mod}(B) \to \mathrm{Mod}(F(2))$ when B is f.g.

5. $C(\mathrm{Mod}(F(J))) \to \mathrm{Mod}(F(J'))$

6. $F: \mathrm{Rep}(K(n)) \to \mathrm{Mod}(A)$ given 2 orthogonal bricks

Wild algebra: rep embed $\mathrm{mod}(F(2)) \to \mathrm{mod}(A)$

The following implications are known: ?

$K(n)_{n\geq 3}$, $S(5)$, $1 \to 2 \rightrightarrows 3$, $1 \to 2$